Railway Age

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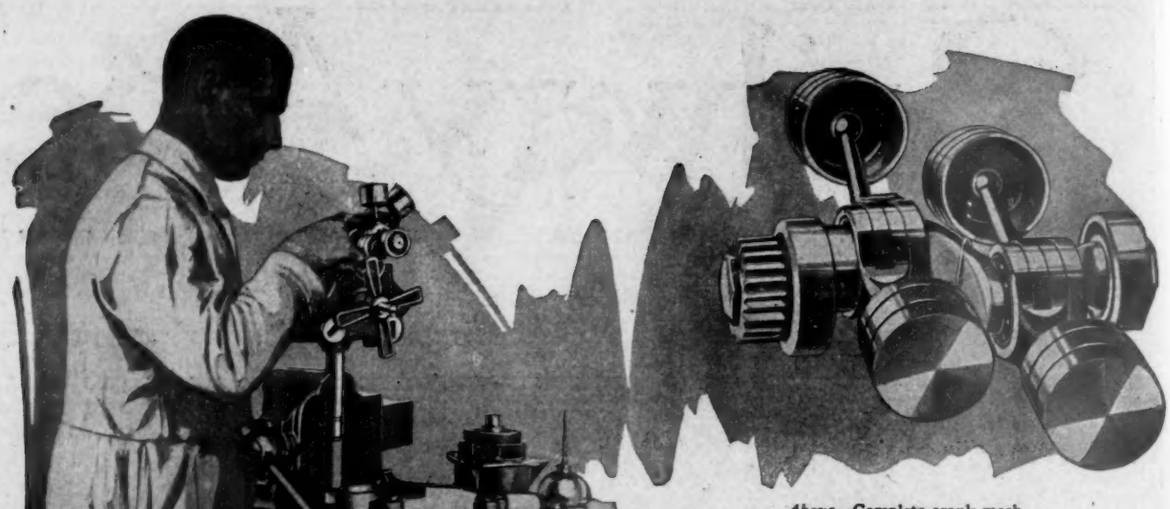
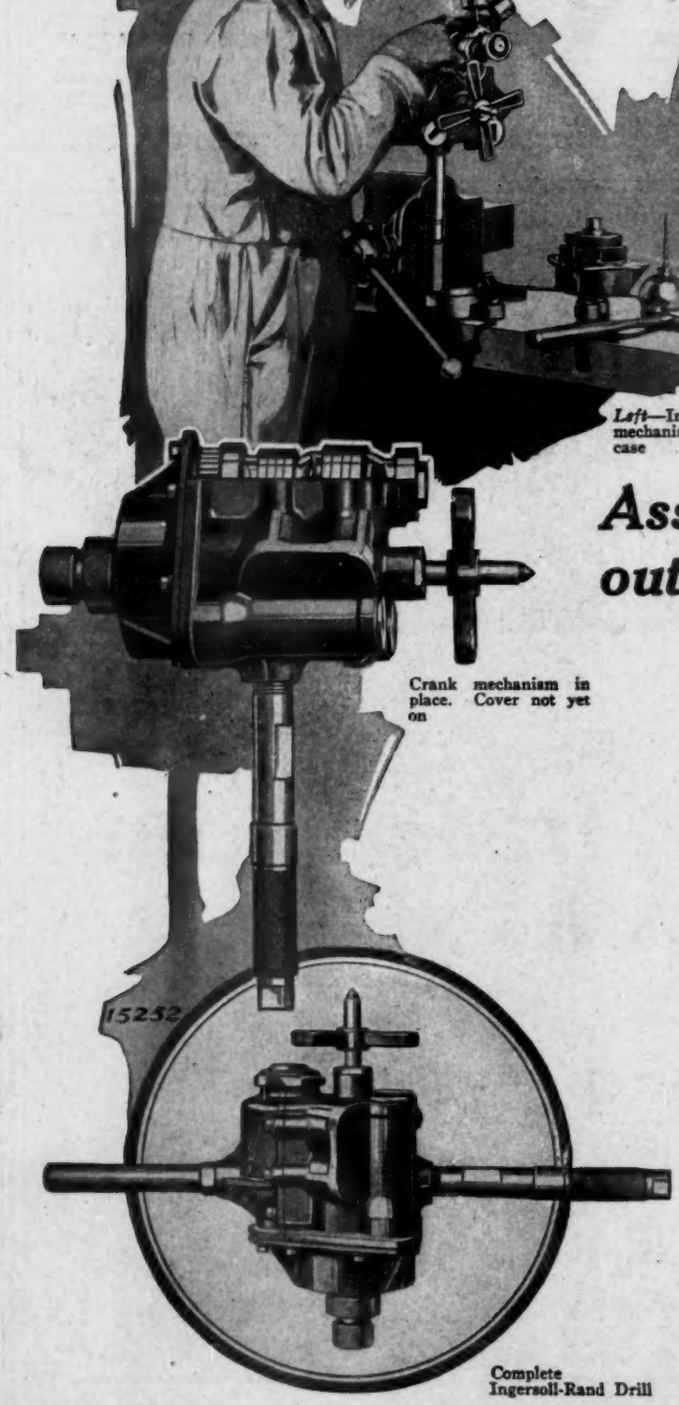


Above—Complete crank mechanism assembled outside of drill

Left—Inserting crank mechanism in drill case



Crank mechanism in place. Cover not yet on

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Ask any tool-room man about what a time and labor saver this is. Or ask us for a complete description of the Pneumatic Drills.

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EDITORIAL

Railway Age

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Six Remarkable Reports

The reports of the six committees appointed by President Julius H. Barnes, of the Chamber of Commerce of the United States, to make a disinterested study of the transportation problem in its various phases, have now been made public. They are to be the basis for discussion in a national transportation conference to be held in the near future. Perusal of the abstracts of the reports given on other pages of this issue of the *Railway Age* will evidence, we believe, that the six reports form one of the best prepared compendiums of well-informed opinion on transportation subjects that have been prepared or presented in this country for some time. The particular feature of the reports that will appeal to the readers of them will prove to be, we believe, the fact that in great measure the reports advance into new ground. Instead of being merely rehashes of previous discussion, as reports of this kind are too often inclined to be, they indicate the result of most careful and intelligent study by leaders in the fields which each respective report covers. The reports are meant for general consumption. Their use in that respect will be considerably assisted by their readability, a factor sometimes lacking in detailed studies of this kind.

Why Railroads Suffer Flood Damage

Reports of serious flood damage to railway property frequently give rise to serious criticism of the managements, and particularly of their engineering officers, for failure to adopt standards of construction which will insure greater certainty against interruptions of traffic from this cause. Some conclusive reasons why such criticisms are unfounded are afforded by a study of the flood damage experienced by the Chicago, Burlington & Quincy in the valley of the Badwater river in central Wyoming during the past summer, as noted elsewhere in this issue. In the first place the rainfall and resulting runoff responsible for the destruction were far greater than any previously recorded in the particular region affected. There is nothing peculiar about this particular area; it is typical of the great expanse of semi-arid country in our western states. Therefore, positive assurance against flood damage would not be solely a question of more expensive construction in this particular 18 miles of line, but a matter of an enormous increase in the investment over all of the lines that may be subjected to these excessively heavy rainfalls at rare intervals. Although the bridges in this 18 miles were all damaged or destroyed by the floods, the conclusion to abandon the line in favor of a new location was not founded on the loss of the bridges but on the damage to embankments throughout the entire territory and the fact that an enormous deposit of silt had raised the floor of the valley to such an extent that the track grade is now but little above the new ground level. Railroads are also sometimes criticized for continuing the extensive use of pile trestles, but it is interesting to note that all the bridges destroyed in the Badwater valley were steel spans on masonry substructures, and that much of the damage done at these crossings consisted of the washing out of the approaches so that the supposed greater security of the permanent construction was of no avail. Moreover, the decision to abandon the line was not due to the effect of the flood on the bridges. The considerations presented above are by no means new. They have been the basis for rational railway development in this country since the very beginning, but in these days when it seems well nigh impossible to establish a basis of transportation rates which will insure an adequate return on the investment in railway property, the necessity for guarding against excessive expenditures in construction is even more urgent than in any time in the past.

Two Notable Collisions in Tennessee

One who tries to sit on two stools falls to the ground. This familiar proverb is attributed to John Heywood, who flourished 360 years ago; and it has proved itself, in human experience, throughout the centuries since that time; but we do not remember our lessons. The collision at Cleveland, Tenn., September 28, reported in this issue of the *Railway Age* affords a new-old lesson on this theme. Two trains moving toward each other were ostensibly protected by two safeguards; the manual block system and a dispatcher's time-order. One of the trains depended on the time-order to the exclusion of the space-interval rule, while the other depended on the block system and deliberately "took a chance" by ignoring the time order; and one engineman was killed. If 360 years seems a long distance to go for a text for our homily, the reader can go back five years. That is a good while to continue ignoring a plain lesson. A very similar collision occurred near Nashville, in the same state as Cleveland, on July 9, 1918, when 101 persons were killed. One of the two chief lessons of the present case was spread throughout America at that time. Can any one say how much improvement in practice was actually started by that impressive example of childish playing with dynamite?

Three Notable Derailments in New England

The derailment at Readville, Mass., on September 11, reported in this issue, like the collision reported on the same page (Cleveland) acquires a glaring prominence from the fact that it is almost exactly like other derailments on the same road a dozen years ago (Bridgeport, Conn., July 11, 1911, and Westport, Conn., October 3, 1912). The fact that numerous lessons of this kind, written in blood, repeat themselves in the course of every few years' government accident records is well-known to all who study those records; and the public, so far as it gives intelligent attention to the matter, often seems disposed to put railroad managements in the same class with the freight conductor in the Cleveland collision, who calmly "took a chance," when he knew that the possibilities included death for his engineman, if not for himself and many others. Is not this widespread blemish on the wisdom and capacity of the railroad profession a matter in

which the feeling or sentiment of the general public ought to be more carefully considered? No sane railroad officer measures the train-wreck disgrace wholly by the ups and downs of the damage-payment figures in the treasurer's books; but people do practically accuse the railroads of that attitude, frequently. The view that a corporation is a soul-less machine persists, and can be met only at the expense of much patience and thought. Again, the facts of the Readville derailment ought to lead, *in many places,* to a thorough revision (or enforcement) of rules for keeping close watch of enginemen's health. In this feature, also, this disaster repeats a lesson already known (see report of derailment at Domingo, N. M.). No one knows how many wrecks have been due to impaired mental faculties, under circumstances where reasonable examinations would have disclosed the impairment; but everybody who is experienced in railroad management does know two things about enginemen: first, that, being human, they are liable not to tell the management when their mental faculties begin to fail and, second, that a competent physician *can* disclose such failures, in many cases, if given the opportunity.

General Use of Derails Condemned

To make a strong and decisive report on an important subject which is much disputed is not an easy task. Usually it is very difficult, and committees are quite liable to evade or postpone the question of committing themselves. The report on derails presented to the Signal Section of the American Railway Association in New York last week (*Railway Age,* page 922) is exceptional in this respect. The derail has found widespread favor as a "moral safety device," and it has not by any means lost all of its friends; but this committee took positive ground against it. The report is of such general interest that we repeat it, in this issue, substantially in full. The committee would have said "shall not be used" instead of "should not," but for the fact that certain states have laws requiring the use of derails at crossings of one railroad with another. The large assemblage of members voted unanimously to make this report the permanent standard of the American Railway Association. No individual could have voted carelessly, as the most notable item in the discussion preceding the vote was a report of a very recent accident, at a crossing in Massachusetts, where a derail *did prevent* a freight train from smashing into the center of a passenger train. The report may be called a triumph of reason, over the shortsighted spirit which unduly magnifies immediate interests as against permanent welfare. The full membership of the committee was as follows:

Atchison, T. & S. F...T. S. Stevens	Mich. Central.....J. C. Mock
Balt. & Ohio.....F. P. Patenall*	N. Y. Central.....F. B. Wiegand
Chi., Ind. & L.....E. G. Stradling	N. Y. Central.....W. H. Elliott*
Chi., R. I. & P.....H. K. Lowry	N. Y., Chi. & St. L...C. E. Denney
Chi. & N. W.....J. A. Peabody	Northern Pac...C. A. Christofferson
Gt. Northern.....C. A. Dunham	Pennsylvania.....A. H. Rudd*
Illinois Central..W. M. Vandersluis	Southern .....W. J. Eck
Kansas City Term.....J. V. Hanna	Southern Pac.....W. E. Boland

The report was drawn up by the three members indicated by asterisks; and their unanimous conclusion was adopted unanimously by the full committee (though we understand that two members have been absent from all meetings). The unanimous action of the whole Section was, therefore, entirely rational. It will be noted that nearly every member of the committee is the head of the signal department on his road; and that most of the roads are prominent. The report represents a country-wide tendency. And a tendency not only among railroad officers but among public authorities as well; some states have permitted removal of derails where formerly they were required.

More About How Railway Employees Are Misled

THE WEEKLY PAPER "LABOR" is issued from Washington. It states at the head of its editorial columns that it "is owned by the sixteen associated recognized standard railroad labor organizations, and is their official Washington weekly newspaper." It also states that "its editorial policy is determined" by a committee "selected by the chief executives of the sixteen organizations." Therefore, whatever it says is an "official" utterance of the heads of the railroad labor organizations.

"Labor" published in a recent issue an article which strikingly illustrates the reason why it is necessary for many other publications frequently to call attention to the fact that the principal reason why it is necessary to maintain present railway rates is that the average hourly wage of railway employees is now 116 per cent higher than it was in 1916. The article in question was republished in the Capital Times of Madison, Wisconsin, an organ of Senator La Follette. The prompt appearance of this article in Senator La Follette's organ illustrates the close collaboration that prevails between the heads of the railroad labor organizations and a certain group of radical statesmen who purport to represent the western farmers.

The article referred to was published under the caption "Profits of Nation's Railroads Smash All Records—Amazing Figures Based on Reports Made to Interstate Commerce Commission—Enough to Pay 8.9 on Every Share of Stock Outstanding." It said the statements made in it were based upon "statistics just announced by the Interstate Commerce Commission covering eight months' operations ending August 30." Among the untrue statements made by it and the facts which refute them were the following:

"The majority of the roads are earning a profit greatly in excess of 5¾ per cent." In the eight months mentioned the earnings of the Class I railways were at the annual rate of only 5.4 per cent on their valuation.

"If the profit ratio of the first eight months of this year is maintained during the remainder of the year the aggregate profit will be sufficient to pay an average dividend on every share of stock outstanding at the rate of about 8.9 per cent." If the railways throughout the year earn at the same rate as in the first eight months their total net operating income will be approximately $1,036,000,000. Their total interest and other fixed charges in 1922, according to the Director of Statistics of the Interstate Commerce Commission, were $669,000,000, and in 1923 are at least $700,000,000. Therefore, after paying fixed charges they would have left about $336,000,000 of earnings. This would be about 4½ per cent on their stock, instead of 8.9 per cent.

"It is also estimated by the Commission that the net profit for the year * * * will not be less than $1,100,000,000." The Interstate Commerce Commission has held that the Class I railways are entitled to earn this much, but it has not estimated that they will earn it.

"Official records disclose the astounding fact that this year the carriers are spending at least a quarter of a billion dollars for maintenance more than was ever before spent for this purpose." Official records show that in the first eight months of the year the railways spent $150,000,000 less for maintenance than in the corresponding months for 1920.

"This year the carriers will have net profits greater than in any previous year in railroad history." In the first eight months of the year the Class I roads earned $86,000 a day less net operating income than in 1916.

Having thus misstated the facts as to what the Interstate Commerce Commission's statistics show, "Labor" proceeded, in effect, to advocate reductions of rates. It said: "It is not denied that members of the Commission are apprehensive

that they will come in for heavy censure because they have sanctioned rates that enabled the railroads to profit to an extent beyond the most sanguine expectations of their managers." This statement implies two things. One of these is that present rates are being maintained to enable the railways to earn excessive profits and that they are earning them. As already shown, the railways thus far this year have earned less net operating income than in 1916, although the investment in their properties is over three billion dollars greater than it was then. Furthermore, within the last three years they have earned only 4 per cent on their valuation, and thus far this year only at the rate of 5.4 per cent. Therefore, the implication that the rates are being maintained to enable the railways to earn excessive profits and that they are earning them, is false.

The second implication of the statement quoted is that railway rates should be reduced. Granting, for the sake of argument, that they should be, from whom should be taken the part of the earnings of which the roads would be deprived? Not from their security owners, who have been, and are now, receiving less return than six years ago. The real reason why the present rates are necessary is that operating expenses are $7,200,000 a day and taxes $480,000 a day greater than they were in 1916. Why are the operating expenses so much higher? Principally because the railways are paying $4,343,000 a day more in wages than in 1916, an increase of 108 per cent.

Other operating expenses are $2,850,000 a day more than in 1916. Most of this part of the increase is due to the higher wages being paid employees of coal mining and manufacturing companies from which the railways buy fuel, materials and supplies.

These figures show clearly that if the rates should be reduced most of the reduction should, directly and indirectly, be taken out of the wages of labor because wages are more than twice what they were seven years ago, while "profits" are less. The *Railway Age* does not contend that a reduction of wages is justified at the present time. That is a matter for the Railroad Labor Board to determine. What we are trying to emphasize is the necessary tendency and effect of such propaganda regarding railway earnings as is being disseminated by the railroad labor leaders through "Labor" and their other organs. It helps to strengthen the demand for reductions of rates. Whatever strengthens that demand increases the necessity for calling attention to the fact that most of the earnings derived from the higher rates are going out in higher wages to railway employees, and therefore tends to create a demand for the reduction of wages.

Why should the heads of the railway labor unions be constantly engaged in carrying on propaganda to increase public sentiment for reductions of rates when this tends to cause a demand for the reduction of wages? The answer is obvious to many people. It is too bad it is not obvious to the railway employees whose money is being spent in carrying on this propaganda. The real purpose of the propaganda is to discredit private management of railways and bring nearer government ownership. If the members of the railway unions suffer as a result of it, so much the worse for them. Most of their leaders want government ownership and apparently care little what effect propaganda carried on to bring it about may have upon the wages of members of the unions.

Meantime, why should there be such close collaboration between "Labor," the organ of the railway brotherhoods, and the Madison Capital Times, the organ of Senator La-Follette, and the organs of other western radical statesmen? These western statesmen purport to represent the farmers. The farmers are complaining their rates are too high. Most of the earnings from the increased rates are going to the members of the labor unions. Why should there be such close collaboration between the representatives of those whose wages are keeping the rates up and men claiming to represent those who are trying to get the rates down? The answer to this question also is obvious. Western radical statesmen, like the heads of the labor unions, are trying to force government ownership on the country. They both see that the surest and shortest way to bring about government ownership is to discredit and cripple private management.

It is a great game in which railway employees are the pawns of the heads of the labor unions and the western farmers are the pawns of the LaFollettes and the Brookharts. It is truly remarkable how many suckers there are in the world.

The Attack on the "Recapture" Provision

IT IS HUMAN to desire to both eat one's cake and keep it. That railways are not immune from this desire is illustrated by the case now before the Supreme Court of the United States in which 19 railways are attacking as unconstitutional the "recapture" provision of the Transportation Act.

Section 15-A contains the rate-making provisions of this act. Repeal of this section is being sought by western radical statesmen who claim it unduly favors the railways. The sentiment of a large majority of railway executives and, we believe, of most business men, is opposed to its repeal. Meantime, these 19 railways are seeking to have torn out of this section the "recapture" provision, which is to the effect that if any individual railway in any year earns more than 6 per cent on its valuation it shall pay one-half of the excess over to the Interstate Commerce Commission.

The *Railway Age* doubts if the Supreme Court will uphold the contention that the recapture provision is unconstitutional. The question of its constitutionality is, however, not the only one, or the most important one, to be considered. There is also a question of railroad policy and public policy to be considered. We stated in an editorial in our issue for April 22, 1922, our reasons for believing the railways should not attack the recapture provision.

All the provisions of Section 15-A must be considered as parts of a single whole in passing judgment on it or any part of it. From 1906 to the end of 1917, when government operation of railways was adopted, the rates of the railways were regulated by both state and federal commissions apparently upon the assumption that it was their duty to keep the rates as low as could be done without violating the constitutional inhibition against the confiscation of property. This policy resulted in such a decline of railroad development that the railroads became unable to handle the commerce of the country. Congress in Section 15-A directed the Interstate Commerce Commission to determine from time to time what would be a fair return for the railways to be allowed to earn. It instructed it, in determining this fair return, to consider the need of the people of the United States for an adequate increase in facilities of transportation. It empowered it to bring into line state rates which were unremunerative.

What this meant was that the railways should not in the future be restricted to an average net return which would barely avoid unconstitutional confiscation, but should be allowed to earn a return large enough to enable them to raise sufficient capital adequately to develop their facilities. Congress added, in substance, that if the railways, on the average, were allowed to earn a fair return, measured by this new standard, some would earn more than a fair return, and these must pay over to the commission one-half of the amount earned in excess of 6 per cent.

These provisions have not thus far been carried out in the

spirit in which they were enacted. The average return the railways have earned under them has been only 4 per cent. This is a confiscatory return. The failure of the provisions to cause to be earned the net return contemplated has been due partly to abnormal business conditions and, more recently, to failure of the Interstate Commerce Commission to administer them as was intended. If the failure of a law to produce the results intended is due to faulty administration, then the administration of it, and not the law, should be attacked. It is not too late yet for Section 15-A to be given the full force and effect intended by the Congress that enacted it. Except as to the railways of western territory, this has been done in the present year.

Suppose that the railways that are attacking the recapture provision succeed in getting it nullified. From the standpoint of expediency their attack on it must be based on the assumption that if it were nullified railways with more than average earning capacity would be allowed to earn and keep more net operating income than they would be allowed to earn and keep if the recapture provision should be retained. Upon what is this assumption based? Is it based upon the belief that the other provisions of Section 15-A would be retained? If so, it is based on a belief for which there seems little justification. The repeal of the other provisions of this section is being demanded by numerous public men who have the backing of a large and powerful part of their constituencies. If the recapture provision should be held unconstitutional, it is extremely doubtful whether the presentation of any amount of evidence and argument would prevent Congress from repealing the other provisions of Section 15-A.

It may be answered, and truly, that the rate-making provisions of the Transportation Act have thus far done very little good. Their passage has resulted in propaganda being disseminated throughout the country to the effect that the railways are "guaranteed" certain returns by these provisions, and that this is what has put up and kept up rates, whereas, in fact, the railways never have earned or received the returns it has been claimed they are guaranteed. If it seemed reasonable to anticipate that Section 15-A would be both misrepresented and administered in future as it has been in the past, we should advocate its repeal.

But is there anything in past experience to justify the belief that under normal business conditions railways with more than average earning capacity would be allowed to earn and keep more net operating income if Section 15-A were completely wiped out than if it were retained? The rates of the railways were subject to effective state and federal regulation for about 11 years before government control was adopted. Throughout this period they struggled ineffectually to get their rates so fixed as to enable them to earn a fair return. In 1910 when they sought a general advance in rates their net operating income was 5.53 per cent on their property investment. In 1914 and 1915 it had declined to 3.93 per cent and 3.98 per cent. In 1916 it largely increased, but in 1917 it declined again to 5.13 per cent. The failure of the railways to get the regulating authorities to let them earn a fair average return was mainly due to the fact that in every rate case evidence was introduced showing that if all the railways were allowed to earn a fair average return some roads would earn what were characterized as "exorbitant" returns. The rates were held down mainly to keep some roads from earning "exorbitant" returns, the result being that railways with average and less than average earning capacity were prevented from earning anything approaching fair returns.

If Section 15-A shall be destroyed the regulation of rates will become subject to practically the same provisions of law as prior to 1918. Do the railways and counsel that are seeking to have the recapture provision declared unconstitutional believe that if Section 15-A were completely destroyed the regulation of rates would be made any fairer and sounder than it was prior to government control? If so, upon what ground do they base their belief? If regulation of rates should be in future made subject to the same provisions of law as before the war, it is probable that the more prosperous railways would not be allowed to earn and retain any more net operating income than they would be if Section 15-A were retained in its entirety, and the Interstate Commerce Commission, should allow the railways to earn an average of 5¾ per cent upon their valuation. On the other hand, all the other railways would earn less net operating income than they would if Section 15-A were retained and the Interstate Commerce Commission should so administer the law as to allow all the railways to earn an average of 5¾ per cent upon their valuation.

If the railways that are attacking the constitutionality of the recapture provision are successful in their attack the final outcome may be the complete destruction of Section 15-A. If they are unsuccessful, the effect produced by the litigation may be the same. The critics of the railways will not fail to call attention to the fact that while most spokesmen of the railways are opposing repeal of the Transportation Act, and especially of Section 15-A, some of them are trying to destroy the one part of the rate-making provisions which they do not like. It would be difficult under present conditions to make an argument more damaging to the railways.

The attack made upon the recapture provision may be based upon a sound view of constitutional law. It is not good statesmanship. What the railways and the country need in regulation is not a rigorous application of constitutional principles, but application of the principle that the railways should be so regulated as to enable them to provide the public with good and adequate service. That principle is embodied in the Transportation Act. The attack upon the recapture provision is, in effect, an attack upon it.

Breaking Down Barriers

IT HAS BEEN THE PRACTICE of the Railroad Y. M. C. A., or the Transportation Department, as it is now called, to hold international (United States and Canada) conferences at intervals of three years. These have been largely inspirational in character, with, of course, some reference to the progress of the movement and the presentation of new and improved practices. The conference held at St. Louis last week was of a distinctly different character in several respects. While it did not lack in inspiration it was largely devoted to the constructive consideration of one theme—Transportation's Fundamental Need. This, it was developed, is the necessity for improvement in the relations between the employees and the managements.

The Railroad Y. M. C. A., of course, does not presume to tell either the employees or the managements how they should conduct themselves, or what their duty is. It does believe, however, that the elements in the problem are such that it is peculiarly fitted to be of assistance in promoting better relations. It can, for instance, afford a neutral ground for the frank and friendly discussion of the fundamental principles involved. Moreover, as an organization which is designed solely to render service to the men and the managements and help them to give better and more efficient service, and because it is dominated by spiritual motives, it should prove invaluable in helping to clear away misunderstandings and inspire the employees (officers and men) to a larger faith in each other.

The discussion of this question at St. Louis, participated in by a number of speakers, covered in a general way the following points: One of the first speakers showed that

progress is measured by the extent to which "more and more people participate in more and more of the good things of life." The vital part that the railways have taken in the development of the country was clearly traced and the necessity for fostering them, if this progress is to continue, was emphasized. The great importance of the human element in railway operation was developed and examples were cited from other industries showing how the employees, with marked benefit to themselves, their employers and the consuming public, had been inspired to greater personal interest in their work. Then followed the brief presentation by officers and men of a few specific examples of marked co-operation in the railway field. Two larger aspects of co-operation were presented at length—employee representation on the Pennsylvania and the experiment in co-operation with organized labor on the Baltimore & Ohio.

A very distinct challenge to the organization was then made by one of the speakers—a challenge to take a larger part in the educational and spiritual programs which must be conducted if conditions are to be improved. Reference was made to the important part that the Industrial Department of the Y. M. C. A. had played in industry in this respect through the annual industrial conferences which it has held in various sections of the country. It was suggested that for one thing the Railroad "Y" might well consider a similar program. The opportunities for educational work of this kind at local points and on systems were also emphasized. The board of management of a local Railroad "Y" includes representatives of the men and the management. These employees (officers and men) are working together on a service program and it should not be hard to broaden it out to include this most vital feature.

The meeting at St. Louis itself demonstrated the value of these suggestions. Here was gathered a large body of railway men and officers. The keen interest which was shown in the addresses, and the way in which the attendance at these meetings was maintained in spite of the necessarily heavy program was little less than remarkable. Men, who at first were skeptical, enthusiastically endorsed the report of the findings committee which included this statement.

"Whereas, the Railway Young Men's Christian Association because of its years of service and its character-building policy, is in a peculiar position to render helpful service in the promotion of right relationships between men and managements, we therefore recommend that this conference resolve:

"That each Railway Young Men's Christian Association undertake a more determined and aggressive policy and attitude toward the promoting of closer relationships between managements and the men and that we use every possible means toward this end."

What is involved in the bringing about of better relationships? Roughly two things. Misunderstandings and mistrust must be minimized and removed. The remedy is to inform and educate the entire personnel, including officers and men, as to the exact facts about railroad operation and the fundamental principles involved in such operation and also of successful dealing each with the other. Men must have faith in each other if continued progress is to be maintained. The best results cannot be secured if managements and men are arrayed against each other, or if the attitude of the former toward the latter is one of toleration. They must be brought to understand that their interests are mutual, real co-operation is to the best interests of all concerned and that in the case of the railroads a proper balance must be maintained between the interests of the public, the employees and the owners. This is a tremendous problem.

The inspiring thing is that the problem is coming to be recognized, and that broad-minded thinking men on all sides are coming into closer and closer agreement as to the necessity of securing enthusiastic mutual co-operation from all the factors involved. This is a good start. Important and interesting experiments are being made in the railroad field on a large scale, which would have been impossible and even inconceivable a decade ago. Many things indicate that we are headed in the right direction. It is fitting, therefore, that the R. R. Y. M. C. A., because of its strategic position in rendering unselfish service to the men and the managements, should undertake by conference and in other ways to bring out the facts and help to remove misunderstandings. Surely also its spiritual program can be an important factor in helping to emphasize the value and importance of the individual and to develop that faith of men in each other upon which real co-operation must be based.

Books and Special Articles of Interest to Railroaders

(Compiled by Elizabeth Cullen, Reference Librarian, Bureau of Railway Economics, Washington, D. C.)

Books and Pamphlets

The Founding of Utah, by Levi E. Young. Chapter 38, "The United States Mail to Utah Before the Railroad," includes an account of the construction of the transcontinental telegraph, and Chapter 39 is entitled, "The Transcontinental Railroad." Interesting pictures and details of local history. 445 p. Published by Scribner's, New York.

Java and the East Indies, by Frank G. Carpenter. Chapter 10 describes rail transport. "The Dutch have in the East Indies five times as much railroad mileage as we have in the Philippines," caption facing p. 71. 280 p. Published by Doubleday, Page & Co., Garden City, N. Y.

Map Collection of the Public Reference Library of the City of Toronto, Canada, compiled by the Library. Chiefly Canadian maps, but the collection ranges from "A New and Most Exact Map of America," of 1668 to the latest railway maps. 111 p. Published by the Torono Public Library, Toronto, Canada.

Out of the Desert—the Historical Romance of El Paso, by Owen White. What the coming of the Southern Pacific in 1881 meant to the growth of the city, p. 151 et seq. 442 p. Published by the McMath Co., El Paso, Texas.

The Recapture Clause of the Transportation Act, by Harry H. McEloy. 80 p. Published by Author, El Paso, Texas.

Statistics of Railways of Class I, United States, (1911-1922), compiled by the Bureau of Railway Economics. Its Statistical summary No. 3. 10 sheets. Issued by the Bureau of Railway Economics, Washington, D. C.

The Third Winter of Unemployment. Report of an Enquiry Undertaken in the Autumn of 1922. The committee making this report was composed of nine men of varied social and political beliefs. The statistics include those for unemployment, relief, relief work, etc., for the transportation industry, and the text contains discussions of what was proposed, what was done, and the results. 350 p. Published by P. S. King & Son, London, England.

Periodical Articles

How People Act When They Are Traveling For Fun, by William C. Hope. The passenger traffic manager of the Jersey Central discusses excursionists in their many variations. American Magazine, December, 1923, p. 38-41, 147-149.

Not Practicing What They Preach, by Arthur Capper. The Junior Senator from Kansas comments on attitude of railway executives towards reduction of export wheat rates. Kansas Farmer and Mail and Breeze, November 17, 1923, p. 5.

Solving the Shipping Container Problem, by B. L. Huestis. Cost of shipping containers, cost of damage claims and what some firms are doing to cut each kind. Management and Administration, November, 1923, p. 575-580.

Letters to the Editor

[*The* RAILWAY AGE *welcomes letters from its readers and especially those containing constructive suggestions for improvements in the railway field. Short letters—about* 250 *words—are particularly appreciated. The editors do not hold themselves responsible for facts or opinions expressed.*]

What Customer Ownership Can Do for the Railroads

CHICAGO.

TO THE EDITOR:

The president of one of the great railroad lines in this country recently scored the legislators who try with their stringent regulations to shackle the railroads.

The entire public, business executives as well as the millions of workers employed by them, take too little interest in public affairs, according to this officer.

What can be done about it? How can the necessary interest be aroused? A number of railroads have already discovered a remedy for the situation. They are combating indifference by inviting the public to become part owners of the railroad. The Pennsylvania, for instance, far famed for its splendid equipment and adequate service, has won much good will through selling small quantities of its stock to a large number of people, securing in effect a customer ownership akin to the customer ownership of light and power, telephone and gas companies which prevails in many communities.

It is a wise utility that knows the potency of distributing its stock far and wide and a wiser one which interests a large portion of its own customers in the territory it serves, through the sale to them of one, two and five-share blocks of its stock. Many companies whose rates are regulated by public commissions, find in customer ownership, not only a panacea for their financial ills, but through it the creation of that good will which causes the public to act in harmony with rather than in opposition to their policies. Except in isolated cases, the railroads have been slow to see the great opportunity which customer ownership offers in carrying out their expansive programs, and at the same time making friends of the citizens whom the legislators try to please. It is well to investigate the merits of this modern plan which, as one writer says "opens a virgin and fertile field for obtaining capital," affords "an automatic rate regulation through dividend distributions" and "fosters a spirit of fairness and impartiality in the public consciousness."

Capital needed for railroad improvements may run into millions of dollars for a single project of a single company. Whence is the money to come? It cannot be taken from the earnings in most cases. Why shouldn't it come from the pockets of the vast numbers who use the utility? They will benefit by the improved service. Why shouldn't they share in promoting it?

They will take a more intelligent interest in the methods of operating the railroads, when their money is helping that railroad to exist. Of course, most of the "customers" who buy the railroad's stock, do it from an investment standpoint but interest and good will is always a by-product. They buy the stock with the best reason in the world when it is properly introduced on the customer ownership plan.

They learn why the railroad's stock is a safe investment. Employees point out to them that the physical property of the railroad which backs the shares, is always there; that it cannot move away in a hurry; that every time the steam whistle blows or they hear the train at the railroad crossings, they have tangible evidence of the stability of the properties behind their shares.

Then, too, actual cash returns are high when the safety of the investment is considered—6 per cent is an average yield.

Prospective customer owners are shown that public commissions regulate the expenditures of the railroads as well as the rates; thus the earnings of the railroad are protected, permitting dividends to be paid with greater regularity.

Something the customer owner likes particularly about buying public utility stock is the easy way in which it can be purchased. The small investor need not hesitate to put his savings into preferred shares or whatever form the security of the utility takes. There is no underwriting expense to be dealt with; no necessity to buy huge blocks of stock in order to get appreciation or service. The aim of a utility is to distribute its stock among the greatest possible number of owners.

Therefore it sells its stock directly and on the divided or partial payment plan, in which the investor can pay as little as five dollars down on each share, then a small payment every month for each share till paid in full.

These are dollars which have, in the case of 14 out of 15 possible purchasers been diverted from "blue sky" investments. How much better for a railroad to adopt a customer ownership plan, advertise it consistently and secure a good share of this money which otherwise goes to the authors of fake promotions.

Indirectly the railroad helps to stamp out sales of undesirable stock. Directly it aids in increasing employment by construction projects that call for workers by the thousands.

A splendid railroad system is a vital necessity in the nation's commerce. Railroads which work out a sane plan of customer ownership financing for their extensions, are benefiting not only themselves but their customer owners. They are national benefactors as well.

The Pennsylvania Railroad brokers small blocks of shares to individual owners. The most modern system would eliminate the impersonal brokerage plan, and sell directly by the enthusiastic efforts of their own employees.

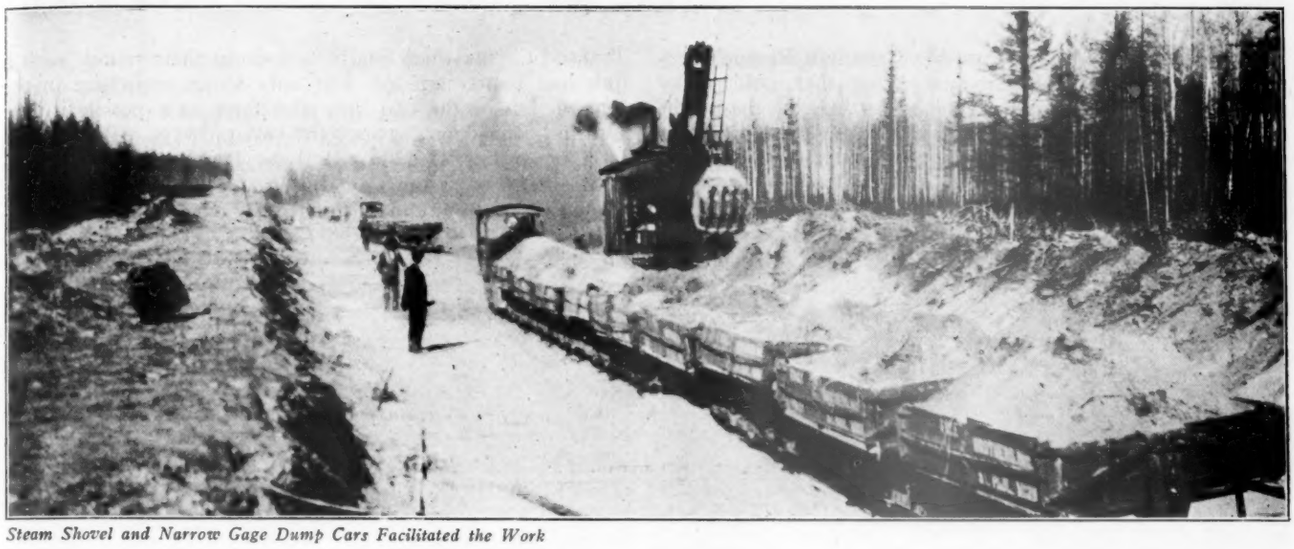
In many instances light, power, telephone and gas companies have been able to finance themselves entirely through the efforts of their own employees. There have been cases among the larger companies where employees have sold millions of dollars in securities without the aid of a single full time salesman. Some companies make a practice of staging employee campaigns of from three to ten days' duration about three times a year—while others find it more practical to maintain a continuous sales drive the year around. Many companies successful in this work supplement short employees' sales drives with regular full time salesmen—these men are specialists in the work and devote their time to closing business which was hanging fire when the campaign ended.

Almost every employee welcomes an opportunity when individual praise may be gained—and the commission paid by most companies of from one to three dollars a share is a great inducement. In addition to the above features is the competitive side of it—quotas are set up for each department which in turn is divided into teams and each individual is given a quota by the department head. Prizes are set up for individuals, teams and departments selling the greatest percentage of their quotas—sometimes a dinner is given the winning team in each department by the losing team.

An employee campaign need not interfere with the daily routine for it is purely a spare time enterprise whereby the employee can add to his income.

The roads must have closer and better relations with the public. Who is then better qualified to tell the story than the road's own employees?

O. W. ERRINGER.



Steam Shovel and Narrow Gage Dump Cars Facilitated the Work

C. N. R. Shortens Transcontinental Line 102 Miles

Twenty-nine Mile Cut-Off Joins Independently Operated Lines and Saves Over One Hundred Miles

By C. S. Gzowski
Chief Engineer, Construction Department, Canadian National

THE CANADIAN NATIONAL has just completed its Long Lake cut-off in Ontario and will put it into operation at once. This is a line 29 miles in length, joining what was formerly the Canadian Northern at Long Lake, its most northerly point in Ontario, with the government-built air line, National Transcontinental, between Quebec and Winnipeg. This cut-off will effect a saving of 102 miles in distance between eastern points and Winnipeg.

Carrying Forward Some of the Lighter Work on the Line

A Result of Consolidation of Parallel Lines

The formation of the Canadian National Railways brought under one management three systems—the Canadian Government Railways, the Canadian Northern and the Grand Trunk, which included the Grand Trunk Pacific. The Canadian Northern had a transcontinental main line from Toronto to Vancouver via Port Arthur, Winnipeg and Edmonton, with a connection from Capreol to Montreal. A combination of that part of the Canadian Government Railways, built as the National Transcontinental from Moncton via Quebec to Winnipeg, with the Grand Trunk Pacific from Winnipeg via Edmonton to Prince Rupert, gave another transcontinental main line passing through Quebec, Winnipeg and Edmonton. The National Transcontinental's line is the shortest line between Quebec and Winnipeg; in fact, it is built on such a direct route that there is no possibility of finding a shorter line. This route has favorable gradients in both directions, having been built with maximum grades against eastbound traffic of 0.4 per cent and 0.5 per cent against westbound traffic. The curvature is very light, the sharpest curves being six degrees, and these were employed sparingly, while the total curvature was kept to a minimum. While the line was ideal for traffic from Winnipeg to Quebec, it offered no advantage to Montreal.

The Canadian Northern had started its lines on the prairies as a granger road and logically had built a line from Winnipeg to the head of the Great Lakes at Port Arthur and Fort William. Lying in a direct line between Winnipeg and Port Arthur is the Lake of the Woods, so it was necessary either to skirt this lake on the north as the Canadian Pacific had done, or go into United States territory to pass it on the south. More fertile land on the southern route and the fact that the line would cost less led the Canadian Northern to pass through the United States for 44 miles.

Easy Curvature and Grades

Having a completed link between Port Arthur and Winnipeg, when the Canadian Northern determined to push east for a transcontinental line, Port Arthur had to be a point en route. The territory to be traversed for 400 miles or more east of Port Arthur was the Laurentian range, an undulating rock-exposed area, breaking sharp and rugged into Lake Superior. To follow the north shore of Lake

Superior would be to duplicate the Canadian Pacific's tremendously expensive construction along that bold rocky shore. The alternative offered was to get back on the height of land where the ground offered the possibilities of a less expensive line with straighter alinement and the possibilities of good gradients. To accomplish this it was necessary to circumvent Long Lake, a body of water 60 miles in length, on the north. The Canadian Northern decided on this northerly route although it lengthened the line considerably.

Excavation Through Typical Country

It was able to get gradients eastbound of 0.4 per cent and westbound of 0.5 per cent and to keep the curvature down to a maximum of six degrees.

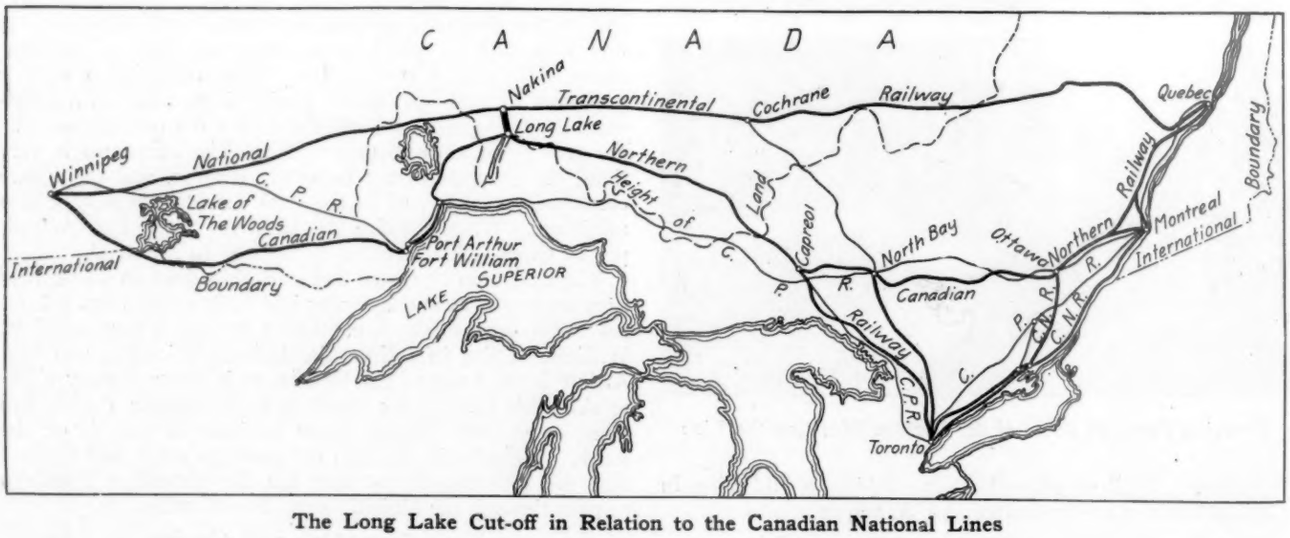
The management of the Canadian National then found itself, when taking over these systems, with two transcontinental lines between eastern points and Winnipeg, with low grades in both directions and light curvature, but the operating distances from Montreal and Toronto to Winnipeg were greater by 46 and 77 miles respectively, than those of their competitor, the Canadian Pacific. It was very apparent that, as the Canadian Northern at Long Lake station, which was at the northern extremity of Long Lake, and was the most northerly point in Ontario on that line, was only about 30 miles from the National Transcontinental connection with it, a link would give a much shorter route between the east and the west than that of the Canadian Pacific. In fact, from the time the Canadian Northern and the National Transcontinental had finally laid down their routes, such a link had been discussed, first only as an assistance in the construction of the two lines and later as a possibility for a traffic connection between the two railways. W. F. Tye, in a paper on "Canada's Railway Problem and Its Solution," read before the Canadian Society of Civil Engineers in January, 1917, and abstracted on page 309 of the February 23, 1917, issue of the *Railway Age*, was the first to promote publicly the advantage of this link. Even before the Grand Trunk was brought under the Canadian National, the management, under the presidency of D. B. Hanna, had seriously considered its construction, but financial difficulties stood in the way. S. J. Hungerford, vice-president in charge of operation, maintenance and construction, had prepared an exhaustive study for the management which showed the savings in time, train miles and money that this cut-off would make for the Canadian National, and one of the first acts of Sir Henry W. Thornton on taking charge of the "Great Canadian Experiment" was to authorize the construction of the Long Lake cut-off.

Route Through Uninhabited Country

Although no particular engineering difficulties were experienced in building this line, it was necessary to make a strenuous fight against time and rigorous climatic conditions in order to complete it in one month less than a year. On the south end most of the cuts are in rock of a hard and tough Huronian formation. On this the contractors had to employ especially heavy steam drills. Considerable muskeg was encountered on certain stretches, and on the north end there were several miles of heavy sand and gravel cuts, some of the sand being set to a condition of soft sandstone. Throughout, the land was covered with a fairly heavy growth of timber. There were no heavy bridges, only three steel structures on concrete abutments being employed.

In order to adjust engine runs an engine terminal had to be built at Nakina, the junction with the Transcontinental line. There had been a division point at Grant, 17 miles east of Nakina, and this was abandoned and as much of the material from that point as could be moved was employed in the development of the new terminal.

As there were no towns or settlements along either route, it was necessary to build accommodations for the employees and their families at Nakina. A well chosen piece of high, well-drained land was selected for the residential section, where living quarters, having all modern conveniences, were built. Instead of clearing off all of the native trees, only enough were removed to give room for and light to the



The Long Lake Cut-off in Relation to the Canadian National Lines

houses, thus providing, at the outset, pleasant surroundings during summer weather.

A 10-stall brick roundhouse with an addition for machine shop and boilers, a stores and office building, an 85-ft. turntable with a concrete circle, a 60,000-gal. water tank and two standpipes, a 200-ton coaling plant, ash pit and two depressed tracks, a 1,000-ton ice house, station building and a storage dam for water supply, drains and customary underground work have been installed at Nakina. Seven and a half miles of tracks were installed in the yard.

Laying Track on the Long Lake Cut-off

The Line is Inaccessible Except in Winter

On January 2, 1923, the contract for the clearing, grading and bridge work was let to Foley Bros. and Hervey. This firm represented a combination of Foley Bros., St. Paul, Minn., with General C. L. Hervey of Montreal. O. W. Swenson was placed in charge of the work for the contractors. Under ordinary conditions it might appear strange to expect work to commence in the dead of winter in a climate where snow abounds and the thermometer goes to 40 deg. below zero. However, it was to take advantage of these two conditions that no time was lost in preparing to get the work under way. There are no roads in that country, and the building of roads for summer use across the muskegs and swamps involves large expense and serious delays. A winter road where the swamps are frozen and snow promotes the use of sleighs simplified matters. Also, rock excavation can be conducted in winter as well as in summer. The plan then was to build winter roads, clear the right-of-way, start blasting the rock cuts, haul in all equipment and heavy supplies required for summer work and be ready when the spring thaws arrived to be cut off from outside points, except for a canoe route by the rivers for transporting men and light supplies. That the plans were well laid and prosecuted is proved by the fact that the first of the grade was handed over for tracklaying in September.

The Start of a Fill Through One of the Muskeg Sections—Note Corduroy Road at Left

Physical Characteristics

The cut-off is 29 miles in length, built to grades of 0.4 per cent in each direction and having a maximum curvature of four degrees. The maximum rise and fall is only 65 ft. The ground traversed is practically the height of land between the James Bay and Lake Superior watersheds. The line runs generally north. This location was selected for

three reasons: it offered the shortest line; the ground and larger bodies of waters lent themselves best to a location in that direction; and, as the line was to link the north and south lines not only for routing traffic from Montreal or Toronto to Winnipeg, but also for shortening the routing from Fort William or Port Arthur to Quebec and other eastern points. It was the line which gave the shortest route for both these movements.

The Long Lake cut-off will shorten the Canadian National route between Toronto and other eastern points and Winnipeg by 102 miles, will provide better grades with less rise and fall because it avoids the drop to the level of Lake Superior, and will have lighter and less curvature. It will provide a route for the winter movement of grain from the head of the Great Lakes through Quebec to Canadian ports that will be 99 miles shorter than any existing Canadian National route. The immediate saving in train miles will pay a very high rate of interest annually on the total cost of the work while the reduction of at least three hours in the running time of passenger trains in addition to a better riding line will so improve the trip that a large increase in business is confidently looked for.

The writer, as chief engineer of the construction department of the Canadian National, had supervision over the work, and F. L. C. Bond, chief engineer of the Central region, had charge of its prosecution under C. G. Bowker, general manager of that region. R. A. Baldwin, engineer of construction of the Central region and K. G. Polyblank, division engineer, had immediate charge of the work.

Freight Car Loading

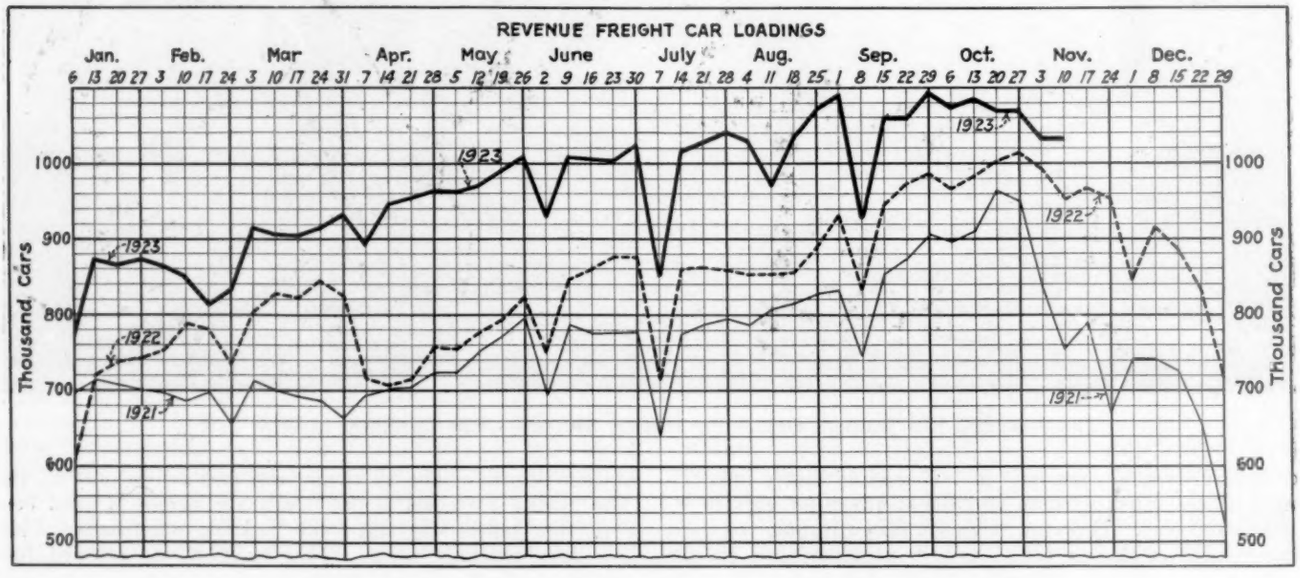
REVENUE FREIGHT CAR LOADING during the week ended November 10, instead of declining, as is usual at this time of the year, shows a slight increase over the loading for the previous week. The total was 1,036,067 cars, an increase of 91,881 as compared with the corresponding week of last year and of 280,290 as compared with 1921. This is the twenty-first week in which car loadings have exceeded a million. As compared with the corresponding week of last year, there was a decrease of 3,235 cars in the loading of grain and grain products and of 935 cars in the loading of coke, but all other classes of commodities showed increases as compared with the corresponding weeks of the past two years. The loading in each district also showed increases as compared with the past two years. Grain, coal and ore loading also showed increases as compared with the previous week, but there was a reduction in the loading of merchandise and miscellaneous freight.

From January 1 to November 1, a total of 155,872 new freight cars were installed in service, of which 21,236 were delivered by the builders and placed in operation in the month of October. There have also been placed in service in the first ten months this year 3,371 new locomotives, of which 408 were installed during October. Of the new freight cars placed in service in October, box cars numbered 7,582; coal cars, 10,592; refrigerator cars, 1,753, and stock cars, 665. The railroads on November 1 had 48,571 new freight cars on order, with deliveries being made daily. Of that number, box cars totaled 22,691; coal cars, 18,245; refrigerator cars, 3,496; and stock cars, 2,791. The railroads on November 1 also had 942 new locomotives on order.

On November 1 the number of locomotives in need of repair totaled 10,112, or 15.8 per cent of the number owned. This was a reduction of 397 below the number in need of repair on October 15, at which time there were 10,509, or 16.4 per cent. Of the total 9,163, or 14.3 per cent, were in need of heavy repair on November 1, a decrease of 292 under the number in need of such repair on October 15. Reports also showed 949, or 1½ per cent, in need of light repair, a decrease of 105 within the same period. The railroads on November 1 had 54,080 serviceable locomotives, an increase of 489 since the middle of the previous month, while the number of serviceable locomotives in storage and ready to meet increased traffic demands numbered 2,517, or 30 more than on October 15. During the last half of October, 21,989 locomotives were repaired and turned out of the shops, an increase of 2,666 over the first half of the month.

REVENUE FREIGHT LOADED
Week Ended Saturday, November 10

Districts	1923	1922	1921
Eastern	241,800	232,381	188,025
Allegheny	203,547	203,315	147,206
Pocahontas	40,908	30,144	33,009
Southern	144,847	138,050	119,396
Northwestern	163,442	133,153	94,262
Central Western	167,278	147,081	114,169
Southwestern	74,245	60,062	59,710
Total Western Districts	404,965	340,296	268,141
Commodities—			
Grain and grain products	49,088	52,323	34,086
Live stock	43,528	37,889	33,722
Coal	190,282	184,610	154,850
Coke	11,334	12,269	6,377
Forest products	75,062	60,597	50,766
Ore	52,812	39,428	8,735
Mdse. L. C. L.	250,110	227,401	215,527
Miscellaneous	363,851	329,669	251,714
Total	1,036,067	944,186	755,777
November 3	1,035,776	979,851	837,576
October 27	1,073,965	999,718	951,384
October 20	1,072,881	989,889	964,811
October 13	1,084,458	969,487	910,529
Cumulative loading for year to date	43,691,728	37,144,181	34,454,905



Transportation's Fundamental Need

This Was the Major Theme Discussed at the Triennial Conference of the Railroad Y. M. C. A.

THE SIXTEENTH INTERNATIONAL CONFERENCE of the Transportation Department of the Young Men's Christian Associations was held at St. Louis, Mo., November 15-18. These conferences are held every three years. The Transportation Department of the Y. M. C. A. includes the Railroad Y. M. C. A., as well as the street railway work and that which is being done for the men in the merchant marine. This year, for the first time, an International Railroad Younger Men's Conference was held at the same time; it was attended by 154 older boys and young men from 26 states and Canada, representing 29 railway systems. These younger men are either employed in railroad service or are sons of railroad men. The larger conference was attended by 648 men, including official delegates from the railroads and the fraternal organizations, members of the boards of directors of railway, street railway and merchant marine Y. M. C. A. associations, and members of the employed staffs of these associations.

As noted in an editorial entitled "Breaking Down Barriers," which will be found elsewhere in this issue, the major theme discussed by the conference was transportation's fundamental need, or, expressed in other words, the necessity for improving relations between the men and the managements.

The conference opened on Thursday afternoon, November 15, and after addresses of welcome on behalf of various interests in St. Louis and responses, organized with the following officers: Chairman, John P. Munn; first vice-chairman, A. M. Schoyer, manager through freight traffic, Pennsylvania Railroad; second vice-chairman, Roy V. Wright, managing editor, *Railway Age*, New York; third vice-chairman, Selden P. Spencer, United States Senator, St. Louis; fourth vice-chairman, Daniel Upthegrove, president, St. Louis-Southwestern Railway; fifth vice-chairman, C. E. Lindquist, chairman, Brotherhood of Locomotive Engineers, Terminal Railroad Association, St. Louis; sixth vice-chairman, J. Doig, paymaster, Canadian Pacific Railroad, Montreal, Que.; secretary, Charles C. Kinney, Philadelphia, Pa.; assistant secretary, J. R. Mercer, Kenora, Ont.; assistant secretary, W. K. Wingfield, Temple, Tex.

A statement of the purposes of the conference was made by G. K. Roper, Jr., senior secretary, Transportation Department, International Committee of the Y. M. C. A.

At the Thursday evening session Dr. Charles A. Eaton, manager of industrial relations, General Electric Company, made the keynote address, speaking on "Transportation's Fundamental Need." This was followed by a morning and an afternoon session on Friday, in which this particular theme was developed in greater detail; for instance, on Friday morning Robert B. Wolf, consulting engineer of New York City, made an address and conducted a discussion on "Creating Interest in Economical Co-operation." This was followed by brief statements as to specific ways in which splendid concrete results had been obtained from co-operation. Those who took part in this symposium were W. H. Newell, general superintendent, Atlantic Coast Line, Rocky Mount, N. C.; W. G. Dudley, Railroad Y. M. C. A. secretary, Southern Railway, Monroe, Va.; C. E. Lindquist, general chairman, Brotherhood of Locomotive Engineers, Terminal Railroad Association of St. Louis; and C. R. Bearmore, general railroad secretary, Y. M. C. A., Chicago.

During the afternoon two addresses covering larger examples of co-operation along more or less radical lines were presented by E. T. Whiter, vice-president of the Pennsylvania Railroad at Chicago, and William H. Johnston, president, International Association of Machinists, Washington, D. C. This phase of the program was closed by a summing up of the situation and a challenge for a larger program on the part of the Railroad Y. M. C. A. to help promote the right relationships, by Roy V. Wright, managing editor of the *Railway Age*.

Other features of the program, which extended over the remainder of the week, included a discussion of the health and recreation work on the Chesapeake & Ohio, Norfolk & Western and New York, New Haven & Hartford; boys' work in railroad associations, an address on the layman's opportunity in the Railroad Y. M. C. A., by Hon. Selden P. Spencer, United States senator from Missouri; the need for work among colored men on American railways, by C. H. Tobias, senior secretary, Colored Department, International Committee, Y. M. C. A.; greetings from the railway men of Japan, by S. Masatomi, National Railroad Y. M. C. A. Secretary of Japan.

A banquet was held at the Chamber of Commerce Building on Saturday evening, at which Daniel Upthegrove, president of the St. Louis-Southwestern, presided. Addresses were made by C. P. Suggs, machinist, Chesapeake & Ohio, Clifton Forge, Va.; Horace Parker, engineer of the Boston & Maine, East Deerfield, Mass., who is also a member of the International Transportation Committee of the Y. M. C. A.; Ernest L. Keathley, stenographer for the Florida East Coast Railway, representing the American Railway Employed Boys' Club; Duncan Robinson of Cleburne, Tex., representing the Hi-Y Club; and Dr. John R. Mott, general secretary of the International Committee of the Y. M. C. A. Doctor Mott also addressed a mass meeting of the delegates and railroad men of St. Louis on Sunday afternoon.

An important feature of the conference was the musical program. The Buffalo, Rochester & Pittsburgh Railway Shopmen's Quartette was present through the courtesy of President William T. Noonan of that railway, as was also the Pullman Porters' Quartette at St. Louis, through the courtesy of the Pullman Company. The song leader was George W. Campbell of the Association College at Chicago.

The local arrangements were under the direction of the Union Station Railroad Y. M. C. A. of St. Louis; the St. Louis Railroad Club also assisted in the entertainment of the delegates on Saturday afternoon.

Because of the limitations of space we are able this week to present only the addresses of Messrs. Whiter and Johnston.

All Groups Concerned Must Co-operate

By E. T. Whiter

Vice-President, Pennsylvania Railroad, Chicago.

The spirit of co-operation between men and groups of men has been the gateway to a great deal of the world's progress —more can be secured through co-operation than through strife. I am convinced that there would be no so-called railroad problem today if a spirit of co-operation, rather than of hostility and repression, had actuated our public policy toward the railroads in the last few decades.

Recently there has been a very noticeable change of attitude. So much so that railroad men are hopeful that the

growing realization on the part of the public that the railroads are doing a big job well and should receive fair play will have a favorable effect on our railroad regulators in Congress and state legislatures. In the coming session of Congress it is likely that you will hear a great deal of talk and discussion about railroad transportation, and that means 95 per cent of all transportation. Already the self-appointed railroad experts are busily drafting more laws although it is plain to every thinking person that what is largely the cause of our present situation is the existence of too many laws affecting the railroads.

Three Groups Concerned

What we need now in order to insure the kind of railroad service people want is not laws but understanding and co-operation between all whose interests are affected. That is a large order. Every one in America is vitally interested in transportation. Some of them know it, but others do not. There are three principal groups who are interested in it from different points of view. There is the group which we speak of as the railroads themselves, by which we really mean railroad management and the army of investors in railroad securities. Secondly, there are the railroad employees, and third, but most important, there is the general public, the shippers, the farmers, the people in communities whose very existence depends on continuous transportation service. Intelligent understanding of the interrelationship of these groups is the basis of the kind of co-operation the railroad industry requires.

The first group, railroad management and investors, is the group charged with the responsibility of supplying the people with railroad service. The failure of a railroad to supply the amount or quality of transportation desired brings down a storm of protest on the heads of railroad management. Also, railroad officers are expected to manage their lines in such a way that those who have invested their savings in them, and hence made their existence and expansion possible, will receive a fair return. Railroad managers, however, have practically nothing to say about the revenues of their properties, for all rates are prescribed by the federal government through the Interstate Commerce Commission. Similarly, they have no direct control over the half of their expenses paid out in wages determined by the Labor Board.

Thus railroad management is confronted, first with the responsibility for honest, efficient and economical railroad performance; second, with a very definite moral and financial responsibility to hundreds of thousands of investors; third, with a very definite obligation to give employees the high standard of wages set by the United States Railroad Labor Board regardless of whether or not the gross revenues will permit it. Yet with all this responsibility railroad management has no control over revenues and more than half of their expenses are directly fixed by an outside agency.

Railroad employees are responsible for the proper performance of their daily jobs. More so than in any other industry they largely supervise themselves. On the Pennsylvania Railroad, for instance, over 240,000 employees are scattered through 13 states and the District of Columbia. It is not possible to supervise every man. Yet, discipline is essential and the proper performance of the job depends in large measure on the employee's attitude toward it. Loyalty alone is a great determining factor in making good or bad service.

Both railroad management and railroad employees, generally speaking, accept willingly the responsibilities which they have assumed. But I do not think it can be said that the public always recognizes its responsibility for the quality and quantity of the railroad transportation service which it requires. This is not said in censure—it is merely stated as a fact, the cause of which is lack of understanding rather than malice.

Contented Employees a Big Asset

Railroad management realizes today that contented, healthy employees, mentally and physically, are one of the greatest assets a railroad can have. It recognizes the virtue of every man's aspirations to better living conditions, to an education for his children, and to independence in old age. And with these aspirations it sympathizes. They make for good citizenship, and in order to help in advancing these ends the Pennsylvania Railroad has established what is known as the Pennsylvania Railroad Employees Provident and Loan Association. It is directed by employees, elected by employees; certain of the company's officers act as advisors, and the expense of conducting its operations is borne by the company. The fund enables employees to purchase stock of the Pennsylvania Railroad by cash payments or payments on the installment plan; it enables them to borrow money, if in need; it enables them to buy or build homes; it furnishes the opportunity to establish savings accounts; and it enables any who wish to do so to make deposits which will increase their pensions when retired, but wholly in addition to and entirely independent of the pension which the company gives to every employee without cost when he or she is retired at the age of 65 or 70 under the rules of the pension department. Officers and employees are alike mutual supporters of the Provident and Loan Association, which marks a decided step forward in a co-operative sense.

There is a growing desire on the part of both railroad managements and their employees to co-operate in all matters affecting their responsibilities to each other and to the public which they serve. Some of you are no doubt familiar in a general way with the success which we have had on the Pennsylvania in effecting a plan of co-operative action between officers and employees. Because it typifies in actual practice the kind of co-operation that is essential in our business, let me give you a short outline of what it is and what it means.

A Closer Contact With Employees

For many years our management has been seeking closer contact with the employees, because it was recognized that the employee had a right to have and should have more than a mere "payday" interest in his job, and that he should have a voice in matters directly concerning his welfare.

As far back as 1907 the management realized that a carefully considered treatment of labor questions was necessary if the company wished to thrive as a successful institution. As an initial effort there was organized a committee of officers of the railroad, to sit as an appeal body of complaints filed with the general manager by the employees, and to act as counsel in advising the general manager as to the merits or demerits of particular cases.

We have, in the last three years, put in effect a comprehensive plan, the keystone of which is a joint committee for each general class of employees, which is the highest authority on the railroad in the determination of all questions affecting wages, working conditions and discipline. These committees are composed of an equal number of employee representatives, elected by secret ballot, and of management representatives. If a two-thirds vote cannot be had, the committee itself decides how a final determination shall be reached. No executive officer of the company, or the board of directors even, has veto power over the decisions of these joint committees.

When we first began to change our managerial attitude towards the problems arising in connection with letting the workmen help manage on questions concerning their interests, many questions arose as to what would be the general effect of the changed relationships as affecting supervision and discipline. Considerable hesitancy was shown on all sides by supervisory officers toward adopting industrial policies which might have a tendency to weaken that disci-

plinary control which must at all times be exercised by management, from the lowest to the highest supervising officer.

This new relationship between management and men on the Pennsylvania Railroad System has not meant abdication of purely managerial functions. It *does* mean that our employees, by slow, short steps, taken over a considerable period of time, beginning as early as 1907, have been given an increasingly larger voice in determining those questions which arise in the course of their daily work which involve differences of opinion between the management and employees.

Progress by Evolution

It has been realized by those who have participated in these discussions that the problem of the extent of employee participation must come by evolution, and progress only as changing conditions warrant. It meant that when the management began to invite the co-operation of the employees in the settling of questions in which they were closely interested and concerned, the employees themselves must be broad-minded enough, experienced enough and well enough balanced to recognize their responsibility in the handling of those matters. These results are being realized.

By some this new relation in industrial management is mistakenly called "industrial democracy"; sometimes it is called "a company union"; again it is called "letting the workman help you manage." But to us on the Pennsylvania Railroad it is known as "employee representation,"—and it is just that very thing, with all that the words imply. Management has not abdicated its right to promulgate any orders or instructions or to impose discipline in its best judgment, and management transmits the decision of reviewing committees, which it is in good faith bound to obey.

One of our officers, a superintendent, who has had many years experience as an officer of the company under the old regime, and who now meets committees regularly each month in accordance with the plan set up, when asked recently whether he would welcome a return of the old order, declared emphatically that under no circumstances would he want to return to the old order or relationship existing between employer and employee. He pointed out that never in all his many years' service as an officer had he ever experienced such willingness to co-operate, nor such actual co-operation between men and management, as was taking place today under our employee representation plan. He stated he hoped we would never go back to the old order, that men knew their officers better today, that officers knew their men better, and that they had more tolerance of one another's viewpoints, more sympathy for one another's problems, because management was acquainting the employees with its problems and vice versa, and out of it all was growing a bond of unified friendly understanding such as had never before existed.

The Pennsylvania Railroad has brought about this co-operative spirit by dealing directly with its own employees, and regardless of the fact that the United States Labor Board, I am sorry to say, has endeavored unsuccessfully to do everything it could to force the Pennsylvania to recognize certain labor unions as representing its employees, and against the expressed wishes of the employees themselves.

So much for co-operation between railroad management and railroad employees.

Co-operation With the Public

Let me say a few words now about co-operation between railroad management and the public. This is fundamentally important because it is the public that uses the railroads and public good-will is most important to the railroad. There is no industry in the country of such a quasi-public nature as the railroads. This has been recognized in law and complied with both legally and morally by the railroads. The fact that today America has the greatest railroad system in the world is evidence of the desire of the railroads to co-operate with the public. In this connection let me give you two recent outstanding examples of this kind of co-operation.

First, since the summer of 1920 when prices and wages had soared to unprecedented levels and railroad operating expenses, as the natural result of such conditions, had increased enormously, partially, however, as the result of government operation, the railroads have reduced their operating expenses about $109,000,000 a month and have passed nine-tenths of this saving, or about $97,000,000 a month, along to the public in reduced rates.

Second, this year the railroads have rendered the public the greatest volume of service on record and, according to the Department of Commerce, a service that has been a third more efficient than ever before in their history. They have loaded more cars. They have moved them faster, and have accepted all freight offered with practically no embargoes or shortage of cars. This they have been able to do, first because of their intensive efforts to repair their equipment and make the maximum use of it; and second, through the wholehearted co-operation of the railroads with shippers and shippers with the railroads.

The reduction of operating expenses and the passing of the benefits of nearly all of these reductions on to the public in the form of reduced rates, and the service which the railroads have given the people within the last year, could not be the result of any "the public be damned" spirit.

It cannot be said, however, that the public attitude toward the railroads, as it has been translated into legislation in the last two decades, has served the railroads in the same measure in which the railroads have rendered service. There are now more than 2,000 laws governing every phase of railroad operation on the statute books of the country and in many instances these laws were prompted by a spirit of railroad "baiting." This is not the kind of co-operation that will enable railroads to improve their service and provide the necessary additional facilities.

Many railroad laws have either increased operating expenses or reduced revenues which, in the last 12 years, have not kept pace with the increased costs of operation. Operating expenses to a railroad are the same as the cost of living to you and to me. The result to the railroads was a decrease in the railroads' net revenues, until in 1920 they almost vanished. The result was car shortages and embargoes because the railroads did not have the necessary financial credit to expand and develop their properties at a pace commensurate with the demands of traffic upon them.

Investor Must Be Encouraged

Credit is essential to the usefulness of any institution, be it a government, a municipality, a corporation, or the drug store around the corner. To the railroads credit means the ability to purchase new cars, lay new tracks, and expand their yards and terminals by raising money through the sale of bonds or stocks to thousands of investors. The railroad plant is never finished; its whole history has been one of continual growth. This growth is dependent upon the willingness of the man with savings to invest his money in the railroads.

The investor must be encouraged; he cannot be coerced and if he has little confidence in the treatment which he believes the railroads will receive at the hands of the public through their legislative representatives he will invest his money elsewhere; possibly in chewing gum or some new kind of popular drink. And this is what has been happening in the last few years. Since 1919 there have been but one or two offerings of railroad stock to the public; and many of the bonds sold have been at discounts below those of industrial companies of far less importance to the country than the railroads.

It is a matter of common knowledge that the railroads this year have purchased and installed more new cars and loco-

motives than in any of the preceding ten years. The total equipment ordered since January 1 has committed the railroads to purchase 285,587 new freight cars and 5,584 locomotives and more than 3,000 passenger cars, at a total cost of about one billion dollars. In the first nine months of this year the railroads obtained only $350,000,000 of this new money, almost all of which was raised through the sale of securities to the public. This means that in the coming year approximately $650,000,000 worth of new equipment remains to be financed; the next year or so will witness the largest offerings of railway securities in many years.

If those who have announced their intention of attacking the valuation and the earning powers of the railroads should succeed in Congress it will not only increase the capital costs of making these improvements to railroad capacity now in progress but will seriously reduce the ability of the roads to make further improvements, if not positively bring to an abrupt end the improvement program by making the costs of disposing of these securities prohibitive. If this really comes about, it means the crippling of the industries of the country as well as the railroads. The alternative is to let the railroads alone so that the securities to cover these expenditures can be sold on terms economical to the railroads, with a smaller addition to the fixed charges of the railroads and with resultant benefits to all concerned.

The simple economic axiom that an organization to serve a constructive purpose must have financial credit was recognized by Congress when it passed the Transportation Act of 1920. And while this Act limits the railroad earnings to five and three-quarters per cent on the valuation of the properties, it makes it mandatory on the Commission to prescribe rates which will yield the railroads a "fair return," now declared by the Commission to be five and three-quarters per cent. It cannot be said that the results of this part of the Transportation Act have been satisfactory in the reconstruction of railroad credit; but it can be said that its provisions are far more satisfactory than the suggestions of some of the radicals in the coming Congress. In the last three years the railroads have earned only about four per cent of their valuation. In the last nine months they have earned about five and a quarter per cent, and while earnings this year have been the best in many, it must be remembered that the traffic carried by the railroads, in other words the business done, has been the largest in the history of the country.

Concerted Action Necessary

Any attacks, therefore, made in the coming months against the railroads' earning power will be made in spite of the fact that the railroads have not earned what Congress declared to be a fair return, and what every industrial manager or even public utility corporation would regard as a rate considerably below a reasonable return. It is important to remember that both the valuation of the railroads by the Interstate Commerce Commission, and the various rate laws or principles now in effect, where undertaken largely as the result of political pressure brought to bear by exactly the same group or groups which are now advocating radical amendments to the existing statutes. The Interstate Commerce Commission has been making a valuation of the railroads for the past 10 years at an enormous expense to the government and the railroads themselves. The work is nowhere near a state of completion; but nevertheless those who were responsible for its undertaking, as well as those who have been attacking rates for the past 10 years, are those who are now attacking the railroads most vehemently.

I have tried to indicate as briefly as possible some of the factors which deserve serious consideration by the public in relation to railroad transportation. It is not enough that these be thoroughly understood. Concerted action on the part of the public is necessary to protect the railroads and people themselves from further legislative tinkering with the transportation machine.

Conclusion

How, then, shall we apply co-operation to the railroad industry?

In a word I would say by insisting that they be given an opportunity to get a little fat on their bones. Give them a holiday from legislation. Keep them out of politics. Let it be known to senators and congressmen that it is no longer popular to make the railroads a step-ladder to political advancement. Railroad officers and railroad employees are co-operating to give this country the best in railroad service. It is time for the country to give the railroads at least the encouragement that comes from having a fair chance to do their job.

Co-operation—Organized Railroad Labor's Contribution

By Wm. H. Johnston
President, International Association of Machinists.

Transportation's fundamental need has been said by many to be a better morale on the part of the working forces. Some think of the railroads as the huge pile of nineteen billion dollars which the Interstate Commerce Commission says they are worth. Some think of them as the thousands of miles of trackage, of yards and stations, locomotives and cars. Some think of them as a few boards of directors and presidents, together with the shareholders. I think of the railroads as two million men.

Without the lives, the muscles and brains of the men who do the work, whether in the section gang, in the shop, in the cab or in the office, the dollars would not earn one cent of revenue, the tracks would never feel a locomotive, the shareholders and their directors would have nothing of value to own and nothing to direct. The men, because they furnish the energy of the vast machine, and because they are human, largely determine whether the machine runs well or whether it runs badly. At the one extreme, if they are all able and tuned to their highest joint capacity and the morale is high, we have the possibility of a railroad giving 100 per cent service; if on the other hand the opposite is true and the morale is low, we have a pile of junk and a deficit. Between these two extremes most railroads lie. Their capacity of approaching 100 per cent depends chiefly on the human factor.

What Is Morale?

What is morale? In part it is an individual matter. It depends on the good-will and the energy of each single man. If every man does his full part, each task is done well and waste is stopped. If the men are careless, indifferent or worried, the machine slows down; its efficiency is impaired and its production is decreased. It is evident, therefore, that inasmuch as a high morale is dependent upon the spirit of service displayed by all employees—even to the least section hand—no railroad can afford to overlook this factor.

But in a complex human organization like a railroad, individual service is not enough. One man may be willing but surrounding conditions may thwart his good intentions. Another dissatisfied man may lose what the one has gained. A competent locomotive engineer cannot get fuel economy out of a badly maintained engine. A shop mechanic cannot do a good job if he is not furnished the proper materials or is subordinate to an incompetent foreman. The shop superintendent cannot enlist the good-will of the men if he is hampered by a harsh and hostile labor policy on the part of the general management. Morale, therefore, lies not only in the spirit of individual service, but also in co-operation.

Co-operation is a word much used, but little understood. If I am boss, and want you to help me, I may ask you to

"co-operate." But when you ask me to do something you desire in return, I tell you to put on your hat and shut the door from the outside. This is not co-operation. It may have the "operation," but it doesn't have the "co." Co-operation implies equality on both sides. It is not a matter of charity, it is a matter of mutual work for mutual advantage.

Two people do not co-operate if one of them does all the work and the other has all the advantage. Two people cannot co-operate if one of them is master and the other is servant. I do not mean that a railroad man should not obey the orders of his official superior, but I mean that the relation between the two should be like the relation between a public executive and a citizen rather than like that between an emperor and a subject. It is necessary to have executives. But it is necessary also to protect the rights of the citizen. That is the reason we have codes of law, and speak of a government of law rather than a government of men. Our national government is a great co-operative enterprise.

Co-operation is, therefore, something stronger than a mere vague desire of a formless mass of people to help each other. It requires organization, an organization intelligent enough to make laws, and strong enough to enforce them. It requires organization which will define the relationships between executives and men in such a way that both may retain their equality while performing their respective duties, that the rights and privileges of both may be respected, and, consequently, that both may be free to co-operate with each other and render the maximum of service to the general public.

Where the Union Comes In

Here is where the union comes in. It furnishes an essential part of the co-operative organization. Bear in mind that absolute monarchies may have laws as well as republics. The difference is that in one case all the law comes from above, and in the other the people have a say. A railroad with no unions would be like an absolute monarchy. It would have organization, but this would not be an organization in which true co-operation is possible. But a railroad which makes agreements with unions may be compared to a republic. The voluntary organizations of the men through those selected for that purpose represent their wishes and needs. The railroads through management represent their wishes and needs. The agreement between these two on wages, hours, working rules, and so on, is the code of law which protects the rights of both. It is the basis of organized co-operation.

It may seem strange to some that a union should be spoken of as an organization furthering co-operation between management and men. Has there not been much friction between them? Have there not been strikes? Of course there have been friction and strikes, but I firmly believe that these are a transitory phase of the relationship. It is only natural that in the beginning the representatives of both should feel their own desires vividly and the desires of the other side faintly. In the beginning, all railroads have operated like absolute monarchies. No absolute monarchy in history was changed into a truly constitutional government without a good deal of conflict between the crown and the people. Power is not given up easily or acquired easily. But in the end, all rulers and executives must come to see that they need help of the true representatives of the governed in the task of government. The union representatives on a railroad, if welcomed and given a fair opportunity to present the desires of their constituents, can help the management to remove causes of dissatisfaction which destroy morale. They may frame a code of industrial law under which the men can work with a feeling that they have had a part in its making and that justice is being accorded them. The men will be free and co-operating citizens of the road, subject to its laws and executives because they recognize their fairness and necessity. With such a feeling a man will work better than with the feeling that he is being driven against his will.

Unions as Co-operators

As long as unions are aggressively fought, they will aggressively fight back. When, finally, it is realized that they have come to stay, they may be tolerated as a necessary evil. The emphasis is still on friction and hostility. But when unions become recognized as a necessary part of the railroad's organism, they are then in a position to exercise their full powers in behalf of co-operation. They can turn to positive purposes. On the basis of justice and confidence, both sides can emphasize the mutual advantage in constructive measures. Because the organizations of labor have, in their former struggles, developed the power to refuse co-operation, they now have the power to exercise co-operation. This phase of the unions' activity is just beginning to come into being. It is a great power for good, and it may help to solve some of the biggest problems of the railroad industry.

I want to emphasize as strongly as I know how the fact that in the task of positive co-operation in the railroad industry there can be no substitute for the genuine unions of the railroad employees. When historians wish to test the character of any government they ask who controls the purse-strings. Who construes the right of suffrage? If the people, then the government is democratic. But if some king or autocratic agency levies the taxes, makes the appropriations and says who shall and shall not vote, then any outward form of democracy is but a sham and a delusion.

I wish to submit for your respectful consideration the nature and structure of our genuine railroad unions in their relation to railroad management as an aid in co-operation. These unions, 16 of them, the transportation brotherhoods, the shop crafts, the signalmen, the telegraphers, the clerks, the maintenance-of-way workers, are purely voluntary and democratic organizations of railroad employees. Taken in the aggregate they encompass in their membership and speak for at least 75 per cent or 1,500,000 of our 2,000,000 railroad workers. They are entrusted by each individual member with authority to safeguard his economic welfare in the industry. This is their primary function. That they have grown and won the confidence of the vast majority of our railroad men testifies not only to their economic necessity from the viewpoint of the rank-and-file but also to their constructive possibilities from the viewpoint of the welfare of the transportation industry.

These organizations have developed leadership, have brought men to the front in whom the membership has implicit confidence, who talk for them, who guide them, who aid them, who are factors in American railroading. I need but ask you to think of such men as Arthur, Carter, Garretson, Stone, Franklin, Jewell, Manion, Wharton, as examples of railroad union leadership and devotion to the service of the human beings working on our railroads. And the ability which the tests of time, experience and struggle have brought forth in national leadership has been brought to the front in regional, district, system and local leadership which is genuinely representative of the rank-and-file. In short, you will find that there has grown up in the railroad industry, under the most democratic auspices yet designed by men, not only a group of leaders and representatives of our railroad workers who are trusted by their constituents, but also a remarkable tradition of fraternity, coherence and unity. There is spirit and purpose in these organizations, and they have developed that internal discipline necessary to sustain this spirit and carry forward this purpose.

The spirit and purpose to which I refer derives its greatest support from the inter-relation of these organizations, their affiliation with one another, their mutual co-operation. This is what strengthens them, this is what gives the individual member self-reliance and pride in his position as a railroad

man. This, perhaps more than anything else, is what safeguards his status, insures his stability and assures him the squarest deal possible in the matter of adjusting wages, working rules and grievances.

Now it is precisely the insurance of this spirit of organized labor, as made possible through affiliation of the workers on one railroad with those of other railroads and industries, which is so bitterly resented by those who profess to hope for lasting co-operation by building on foundations other than those of the genuine voluntary organizations of our railroad workers. But it is exactly the very presence of this spirit and the faculty for carrying through their purposes which places the regular unions in such an unusual position to develop co-operation with management to the highest degree possible. In other words, I maintain that no other type of employees' organization is as well constituted as the railroad unions of organized labor to benefit the railroad industry under a policy of true co-operation.

As I have already indicated, co-operation, when it is sound and enduring, must be absolutely voluntary. No duress, no matter how remotely or indirectly applied, no artificial stimulation, through special financial incentives such as piece work, no intriguing the conventional forms of "non-financial" incentives, profit sharing, or employee stock sales will create lasting voluntary co-operation on the part of the railroad workers. Nor indeed does any artificially created, unaffiliated, undemocratic organization of employees provide the foundation upon which to build real co-operation. In the very nature of things the latter type of organization can and does exist only by managerial fiat. It dare not tolerate in its ranks employees who are loyal to legitimate organized railroad labor. Witness the turmoil on those roads where for instance the shop strike has been disposed of and where so-called company unions are trying to function and where men are obliged to drop their union membership if they wish to enter or remain in the service.

The B. & O. Experiment

Some time ago I said publicly that the International Association of Machinists was searching eagerly for a progressive employer who would, on the basis of full recognition of the union, accept our co-operation for the increasing of efficiency and the furthering of economy in the interest of service to the public. It would be understood, of course, that any benefits accruing to the concern through improved service would be shared justly between the parties responsible therefor. Since that time we, together with the other railroad shopcrafts, have found such an employer in one of the great railroad systems of the country—the Baltimore & Ohio. We have made an agreement for mutual co-operation, and have worked out a concrete experiment in the shops, with which both sides are pleased. I think we can now give points in efficiency and economy, in better shop service, in improved morale, to any railroad which relies on piece work or other speeding-up devices, or seeks to circumvent genuine trade unionism.

Briefly I might summarize the development in co-operation on the Baltimore & Ohio, first, as the acceptance by the Baltimore & Ohio management of the standard shop craft unions as the proper agencies representing the shopmen. But instead of being simply tolerated as a necessary evil, with a purely negative attitude towards the welfare of the railroad, they are now regarded as desirable agencies in the stimulation of human efficiency on the Baltimore & Ohio. Thus the ordinary negative attitude which results from the usual status accorded the shop unions by most managements is here displaced by a constructive helpful attitude towards management.

On the basis of this understanding we have, among other things, placed at the disposal of the Baltimore & Ohio a service to help improve the morale of the mechanical department through our union organizations. It is our purpose to align the locals, shop federation, districts and system federations of the Baltimore & Ohio shopment definitely behind a constructive program of improved shop, yard and roundhouse operation, better maintenance service, increased production, safety and the elimination of waste. The management on the other hand has assured us that it will do what it can to make this improved maintenance economy count in the direction of steady work the year around. Thus the men need have no fear that better production on their part is going to result in furloughs just that much sooner, as ordinarily happens on railroads where narrow economy, piece work and anti-union policies prevail. And finally it is definitely accepted by both management and shop men that,

> "The welfare of the Baltimore & Ohio Railroad and its employees is dependent on the service which the railroad renders the public. Improvements in this service and economy in operation and maintenance expenses result chiefly from willing co-operation between the railroad management and the voluntary organizations of its employees. When the groups responsible for better service and greater efficiency share fairly in the benefits which follow their joint efforts, improvements in the conduct of the railroads are greatly encouraged. The parties to this agreement recognize the foregoing principles and agree to be governed by them in their relations."

This quotation is the preamble to the agreement negotiated last May between the Baltimore & Ohio management and the Baltimore & Ohio System Federation No. 30. It reflects the spirit and purpose which guides the individual unions composing this federation in their relation to the Baltimore & Ohio Railroad.

The service we have put at the disposal of the Baltimore & Ohio is of the most superior engineering character. It is under the general direction of O. S. Beyer, Jr., who is retained by us as consulting engineer. Mr. Beyer, aside from his training as an engineer in our best technical schools, his practical experience as a railroad man which he acquired in the service of the industry, has a grasp of the human problems of railroading which it is not only necessary but indispensable for the guidance of such a service.

The Underlying Idea

The idea underlying our service to the Baltimore & Ohio may be compared to the idea which underlies the engineering services extended to railroads by large supply corporations which have contracts with these railroads to furnish, let us say, arch brick, superheaters, stokers, or lubricating oils. The union members furnish their services, and also help the road with expert advice as to how to employ those services to the best advantage to all. In response to the recognition accorded us by virtue of the agreement or contract existing between us and the management it becomes peculiarly feasible for us to take steps which will develop greater confidence between management and men, and create, as it were, an all-pervading collective will for the major purposes of railroading; namely, efficient satisfactory service to the public, a fair return to the investors and adequate wages and steady employment for the workers.

The developments on the Baltimore & Ohio, to which I refer, have now been under way definitely since last February. There is not time here to go into the details of these developments. Suffice to say that one of the principal shops of that railroad was selected in which to work out the technique of co-operation under Mr. Beyer's direction. This has now been done and the results achieved are being worked up in report form as a practical object lesson of the benefits to be derived from co-operation. At the same time the general labor policy upon which co-operation on the Baltimore & Ohio is based is being brought home to every representative of management and every union representative as well as to every shopman all over the system. So that when this new policy is thoroughly understood it simply becomes

a matter of taking definite practical steps to carry it over into the multitudinous daily actions and relations which constitute railroad maintenance operation.

Conclusion

In conclusion, let me emphasize just two important things. First, although we have been intensively active on the Baltimore & Ohio for barely eight months and the surface, so to speak, has hardly been scratched, the effect of the new policy of co-operation on that road is clearly manifesting itself in the splendid service the road is rendering the public, the high economy with which it is being operated and the excellent morale which prevails through the rank-and-file. These facts are statistically demonstrable, especially when we compare the Baltimore & Ohio with some of its competitors who maintain a different labor policy. Second, I want to say that we, the legitimate, standard, genuine unions of the shopmen, are more than eager to offer the same positive co-operation to any railroad management which is intelligent enough and courageous enough to see the inevitable logic of events and one whose railroad conditions are ripe for such co-operation. I maintain that such a management would never again, as long as it retains its good senses, desire to see the affiliated shop crafts effaced from the scheme of things on its road.

Lessons of Six Train-Accidents

THE LATEST PUBLICATIONS of the Bureau of Safety, of the Interstate Commerce Commission, bring together official references to two notable collisions and four derailments, with data for various lessons in train operation to be deduced therefrom. The main points of these records are noted briefly in the editorial columns; numerous other details will be indicated by the condensed accounts given below.

Derailment at Readville, Mass.

The Interstate Commerce Commission has issued a report, illustrated with photographs, on the derailment of eastbound passenger train No. 3102 of the New York, New Haven & Hartford at Readville, Mass., on September 11, when the locomotive and tender were overturned while moving at high speed and the engineman and fireman were killed. Forty-eight passengers and one employee were injured. This collision was due to running through a No. 8 crossover at uncontrolled speed; and the conditions were very much like those of similar notable collisions at Westport, Conn., and Bridgeport, Conn., on the same road several years ago (1911 and 1912). In each of the three cases, a fast passenger train was being diverted from one main track to another through a short crossover and in each case adequate visual roadside signals were disobeyed. In the present case, if the first car, a wooden coach, gas lighted, occupied by many passengers, had come in contact with the overturned engine, instead of sliding by on one side, the number of fatalities, says the report, would undoubtedly have been as great as in the earlier disasters.

At Readville, the train consisted only of a locomotive and three cars. The signalman, in a tower close to the point of the derailment, together with other witnesses, saw that the train was moving too fast, and one man gave stop signals which appeared to have been heeded and acted on by the runner, but not until the engine was almost on the crossover. The engineman had seemed to be in normal physical and mental condition during this trip, which had begun only an hour or two before. The road foreman had regarded this engineman as one of the most careful in observing speed limits.

The medical examiner for Suffolk County, Massachusetts, made an autopsy on the body of the dead engineman and reported that he had found an oedema of the brain, a condition which clouds the sensorium and may cause irrationality, at uncertain times and in various degrees. The physician theorizes that the waving of the arms by the men on the ground (who tried to stop the train) aroused the engineman from a temporary lapse, from which he was suffering. The doctor concluded that the oedema was probably of long standing. The chronic form of this malady is commonly connected with chronic disease of kidneys and it is likely that a physical examination of the engineman prior to this derailment would have shown high blood pressure and other indications of impaired health. The inspector, discussing the physician's report finds no record of any physical examination of the engineman since 1908, although he had successfully passed an examination of the eyes this present year. The engineman was last attended by a physician in 1918, when he had influenza; was 60 years of age; and the impression of his associates was that he enjoyed robust mental and physical health.

Referring to a derailment at Domingo, N. M., last July, which apparently was due to a similar failure of the engineman, the inspector expresses the belief that the examinations of enginemen on the New York, New Haven & Hartford are not adequate. The company has records of the condition of enginemen and firemen when they apply for insurance in their brotherhoods, and there is an agreement that they shall be re-examined when the superintendent finds re-examination necessary; but it appears that this is not done except when men are promoted; the inspector calls for re-examination at stated intervals.

Referring to the derailments in Connecticut, in 1911 and 1912, the report says that at that time the road represented that longer crossovers would be put in, wherever possible; but no evidence was found that the company ever attempted to carry out this change at Readville. The Readville crossover was renewed in 1921 but its length was not changed. The report ends with repetition of the demand made in the earlier cases, for automatic train stops; or, in the absence of these, a rule requiring high speed trains to be stopped before setting switches for them to run through a short crossover.

Collision at Cleveland, Tenn.

The Interstate Commerce Commission has issued a report, dated November 6, on a collision on the Southern Railway near Cleveland, Tenn., on September 28 when westbound passenger train No. 41, consisting of a locomotive and 11 cars, moving at about 15 miles an hour, collided with an eastbound freight moving at about 12 miles an hour; both locomotives badly damaged; 5 freight cars wrecked; passenger engineman killed and 16 passengers and 10 employees injured. This collision occurred about 4:45 p. m. The passenger train was at fault. The conductor and engineman had an order to wait at Cleveland yard, about a mile west of the passenger station, until 4:40 p. m., and also a clearance card indicating that the block section would be clear on arrival of the freight; but it appears that the wait order was acted on, while the clearance card was ignored. The engineman having been killed, it is assumed that probably he did not read the clearance card; but, several other men are held blameworthy. The conductor trusted the train porter to see that engine No. 4530, of the freight, had arrived at Cleveland yard (where eastbound freights regularly leave the main track). The conductor claims that it was well understood that he might delegate such a duty to the porter, and on this occasion, he, the conductor, was engaged in collecting tickets.

There were several engines in the yard and the porter did not locate engine No. 4530; but it was 4:44 p. m. and so he thought it was all right for the train to proceed. He had not seen the orders. The conductor had sent the orders to

the engineman by the road foreman of engines, who handed them to the fireman; and the fireman says that he read the wait order but did not notice the clearance card. The fireman also failed to locate engine No. 4530 and took it for granted that the freight train had arrived and was somewhere in the yards.

The freight had been detained five minutes by the bursting of an air hose and then, although knowing that they could not reach Cleveland by 4:40, the conductor and engineman concluded to depend on the block signaling (manual) and "took a chance," disobeying the time order. The engineman of the freight, after starting up, following the unexpected delay, discussed with the fireman the advisability of sending a flag ahead; but, with the consent of the conductor, he went on.

The chief dispatcher, questioned about the propriety of allowing the passenger train to proceed nearly a mile westward from Cleveland station (which is the block station) before the opposing freight train had cleared the block, said that he had full authority to allow one train to enter a block occupied by another. Dispatcher Hudson said that he instructed the operator at Cleveland to tell the conductor that several engines were in the west yard and to be certain that No. 4530 was in. He said that the wait order was issued "so as to give the freight train clearance time on train No. 41."

The inspector holds the passenger conductor responsible, as above indicated; and also holds him blameworthy for not showing his orders to any member of the train crew. The road foreman is held at fault for carrying the conductor's order (Form 31) and taking no receipt therefor; the rule requires the conductor to take the engineman's receipt in such cases. The conclusion is obvious, says the report, that allowing the passenger train to depart from a block station and run to the outer yard as in this case removes the benefit of block signal protection.

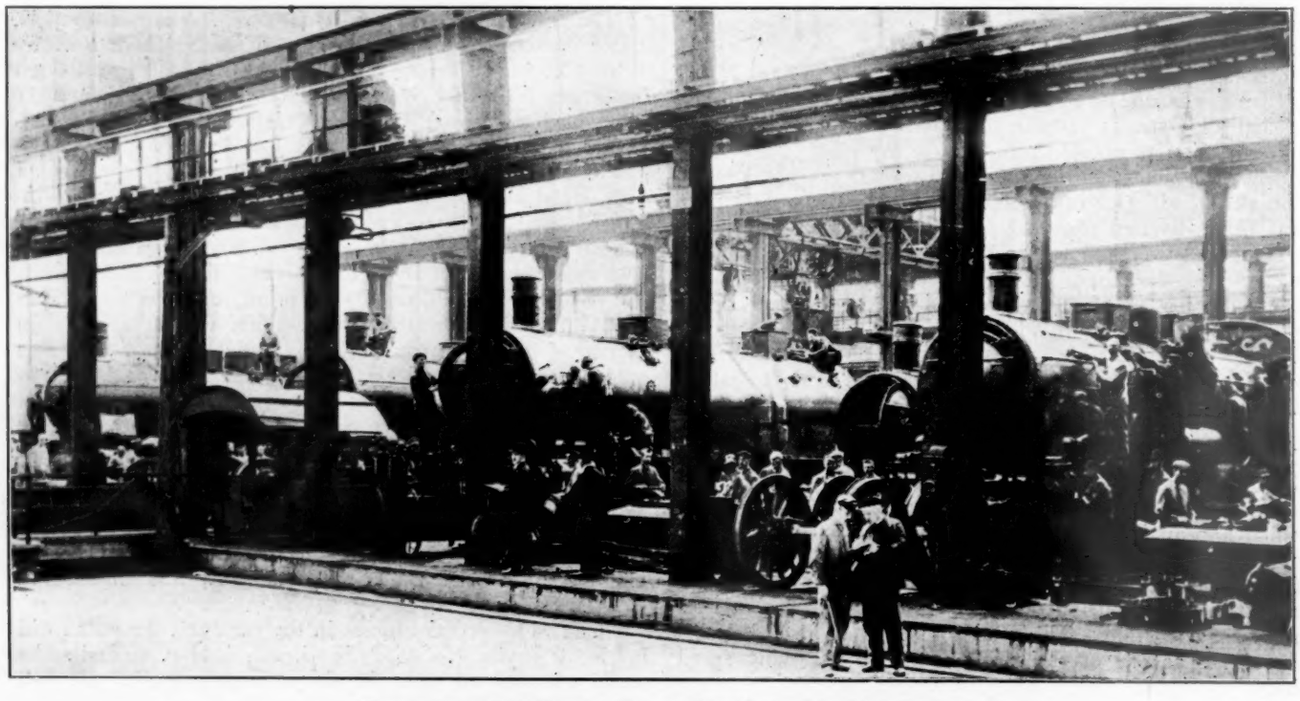
Several accidents which the commission has investigated have resulted from this practice and "immediate steps should be taken" looking toward proper observance and use of the block signal system.

Domingo

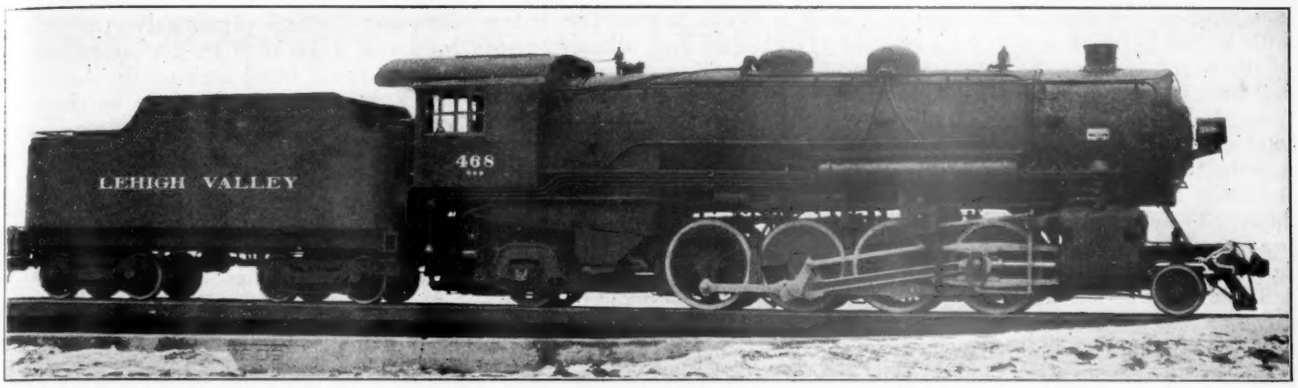
On the Atchison, Topeka & Santa Fe, near Domingo, N. M., on July 3, 1923, westbound passenger train No. 9, consisting of two locomotives and 14 cars, moving at full speed, about 11:51 p. m., was derailed on a curve of 8 deg. 30 min.; and the locomotives and eight cars were wrecked, the leading engine being overturned and the other engine and four cars lodging on their sides. Both enginemen and both firemen were killed and 45 passengers, one mail clerk and one employee were injured. The government inspector, after an exhaustive investigation, concluded that the cause of the derailment was excessive speed; though the testimony was conflicting. The highest estimate of the speed was 60 miles an hour. The physician who examined the body of the engineman of the leading engine was of the opinion that death had been due to heart shock and failure; and that this had occurred before the derailment. There was no doubt that this engineman was in full possession of his faculties when he approached the station, two miles back of the point of derailment, but it is believed that he did not apply the brakes at all. All of the employees involved in this derailment were experienced men.

THE SHOPS of the Central of Georgia at Savannah, Ga., were damaged by fire on the night of November 16 to the extent of several hundred thousand dollars. The paint shop, the upholstering department and the planing mill were destroyed; also a number of cars.

THE VIRGINIAN RAILWAY announces that enginemen and firemen have been secured in the open market in sufficient numbers to move the company's business, though ninety per cent of the men in these classes left their jobs in the strike of November 8. Applications for employment were received in large numbers from competent men out of work.



Locomotive Building at Krupp Works, Essen, Germany



Lehigh Valley Class N-5-B Mikado Locomotive Built by American Locomotive Company

Mikado Locomotives for the Lehigh Valley

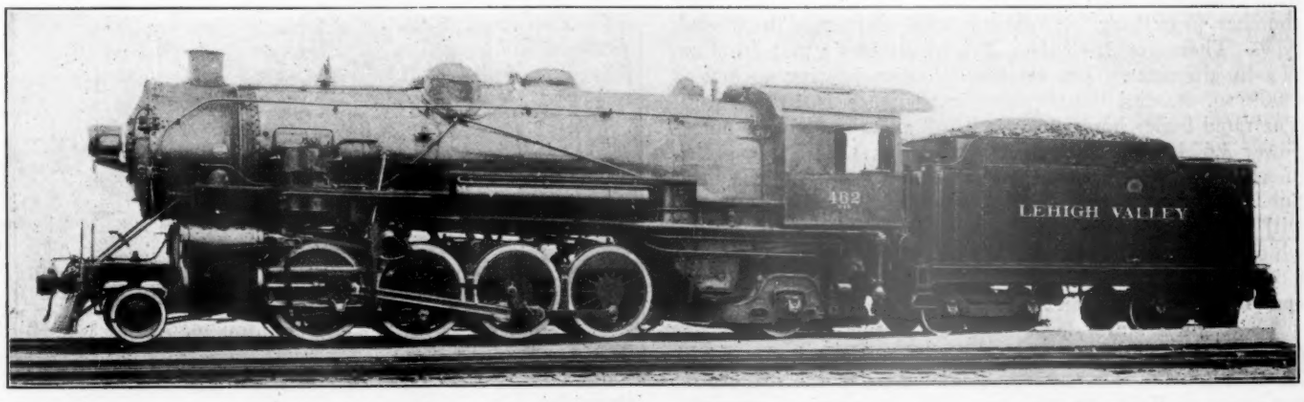
Heavy Freight Engines for Anthracite Road Burn Soft Coal —Booster Increases Tonnage Capacity

THE LEHIGH VALLEY has recently increased its freight handling capacity by the addition of 30 heavy Mikado type locomotives. The order for this new power was divided equally between the Baldwin Locomotive Works and the American Locomotive Company, each builder furnishing 10 locomotives without a booster and five with a booster. Although similar in weight and in general proportions, there are, however, a number of differences in the designs as worked out by the two builders.

Locomotives of the 2-8-2 type were first used on the Lehigh Valley about 11 years ago, and the number has been steadily increased as additional power has been purchased from time to time. In the past, the 2-8-2 type locomotives on this road have been fitted with wide fireboxes having a large grate area suitable for burning a mixture of anthracite and bituminous coal. The Mikado locomotives recently received are the first ones of this type on the Lehigh Valley which are fitted with medium wide fireboxes and a grate designed for burning soft coal. In this connection, a comparison between the locomotives built by the Baldwin Locomotive Works in 1921, known on the road as Class N-3-A, and those furnished by the same builder in 1923, which are known as Class N-4-B, is of interest. Both designs had 27-in. by 30-in. cylinders, 63-in. driving wheels and were of approximately the same weight. The older engines carried 190 lb. steam pressure and had a rated tractive force of 56,100 lb. An increase in steam pressure to 200 lb. raised the tractive force on the 1923 engines to 59,000 lb., exclusive of the booster. The fireboxes on the 1921 locomotives were of the Wootten type, 114⅛ in. wide by 126 1/16 in. long inside, which gave a grate area of 100 sq. ft. and a heating surface of 264 sq. ft. in the firebox and 84 sq. ft. in the combustion chamber. In the new soft-coal burning locomotives, the fireboxes are 90 in. wide by 120 1/16 in. long, which gives a grate area of 75 sq. ft. and a heating surface of 224 sq. ft. in the firebox and 112 sq. ft. in the combustion chamber. Both have the same number of tubes and flues, all of them being 17 ft. 6 in. long.

The boilers used on the Mikado type locomotives built by the Baldwin Locomotive Works in 1923 were practically the same as those designed for the Lehigh Valley locomotives of the Pacific type, Class K-5, the first of which were built in 1916. These locomotives are used in fast freight and heavy passenger train service and burn soft coal. The standardization of locomotive boilers and the use of one design for more than a single type of engine, where such use is possible and the details have been well worked out, simplifies the maintenance and reduces the cost. Standardization of mechanical parts is frequently, if not usually, given careful attention, but standardization and interchangeability of boilers have often received far less consideration than their importance warrants.

The new Baldwin Mikado locomotives with boosters weigh 325,200 lb. in working order, of which 237,900 lb. is on the drivers. The cylinders are 27 in. diameter by 30 in. stroke.



Lehigh Valley Class N-4-B Mikado Locomotive Built by Baldwin Locomotive Works

The rated tractive force of the locomotive alone is 59,000 lb. with 11,000 lb. additional for the booster. The boilers are of the wagon-top type, 82 in. diameter inside the first ring, and have a combustion chamber 48 in. long. There are 254 tubes, 2¼ in. diameter, and 45 flues, 5½ in. diameter. The total evaporative heating surface is 4,110 sq. ft. and the superheating surface is 980 sq. ft. According to Cole's ratios, the boiler horsepower is 2,770 and the cylinder horsepower 2,624. The estimated coal rate is 113 lb. per sq. ft. of grate per hour. These proportions should give a boiler which will furnish ample steam without heavy forcing.

The Mikado locomotive, with booster, built by the American Locomotive Company, weighs 325,000 lb. in working order, of which 239,000 lb. is on the drivers. The cylinders are 27 in. diameter by 32 in. stroke. The rated tractive force of the locomotive alone is 63,000 lb. and 74,000 lb. with the booster added. The boilers are of the straight-top type, 90

TABLE OF DIMENSIONS, WEIGHTS AND PROPORTIONS

	American	Baldwin
Builder	American	Baldwin
Type of locomotive	2-8-2	2-8-2
Service	Freight	Freight
Cylinders, diameter and stroke	27 in. by 32 in.	27 in. by 30 in.
Valve gear, type	Baker	Baker
Weights in working order with booster:		
On drivers	239,000 lb.	237,900 lb.
On front truck	29,500 lb.	29,300 lb.
On trailing truck	56,500 lb.	58,000 lb.
Total engine	325,000 lb.	325,200 lb.
Tender	164,500 lb.	151,800 lb.
Wheel bases:		
Driving	16 ft. 6 in.	16 ft. 6 in.
Total engine	37 ft. 1 in.	36 ft. 6 in.
Total engine and tender	69 ft. .0¼ in.	68 ft. 5¼ in.
Wheels, diameter outside tires:		
Driving	63 in.	63 in.
Front truck	33 in.	33 in.
Trailing truck	45 in.	45 in.
Boiler:		
Type	Straight-top	Wagon-top
Steam pressure	200 lb.	200 lb.
Fuel	Soft coal	Soft coal
Diameter, first ring, inside	90 in.	82 in.
Firebox, length and width	120⅛ in. by 90 in.	120⅛ in. by 90 in.
Tubes, number and diameter	234—2¼ in.	254—2¼ in.
Flues, number and diameter	50—5½ in.	45—5½ in.
Length over tube sheets	17 ft. 6 in.	17 ft. 6 in.
Grate area	75.2 sq. ft.	75.2 sq. ft.
Heating surfaces:		
Firebox and comb. chamber and arch tubes	357 sq. ft.	376 sq. ft.
Tubes and flues	3,652 sq. ft.	3,734 sq. ft.
Total evaporative	4,009 sq. ft.	4,110 sq. ft.
Superheating	1,074 sq. ft.	980 sq. ft.
Comb. evaporative and superheat'g	5,083 sq. ft.	5,090 sq. ft.
Tender:		
Water capacity	8,000 gal.	8,000 gal.
Fuel capacity	12½ tons	12½ tons
General data estimated:		
Rated tractive force, engine 85 p. c.	63,000 lb.	59,000 lb.
Rated tractive force, booster	11,000 lb.	11,000 lb.
Cylinder horsepower (Cole)	2,624 hp.	2,624 hp.
Boiler horsepower (Code) (est.)	2,760 hp.	2,770 hp.
Weight proportions:		
Weight on drivers ÷ tractive force	3.80	4.02
Total weight engine ÷ cylinder hp.	123.9 lb.	124.0 lb.
Boiler proportions:		
Boiler hp. ÷ cylinder hp., per cent	105	105.5
Comb. heat surface ÷ cylinder hp.	1.94	1.94
Tractive force ÷ comb. heat. surf.	12.38	11.58
Tractive force × dia. drivers ÷ comb. heat. surface	781	730
Cylinder hp. ÷ grate area	34.9	34.9

in. in diameter inside the first ring, and have a combustion chamber 46 in. long. Of the staybolts, 650 are of the flexible type. There are 234 tubes, 2¼ in. diameter and 50 flues, 5½ in. diameter. The total evaporative heating surface is 4,009 sq. ft. and the superheating surface is 1,074 sq. ft. The rated boiler horsepower is 2,760 and the cylinder horsepower 2,624. The estimated coal rate is 113 lb. per sq. ft. of grate per hour. Tubes and flues are welded to the back flue sheet. In comparison with the Baldwin locomotive, it will be noted that the stroke of the cylinders is 2 in. longer, which somewhat increases the tractive force. The boiler is 8 in. larger in diameter, the superheating surface is larger and the number of tubes somewhat less.

The Lehigh Valley locomotives are counterbalanced in accordance with the Master Mechanics' standards, and particular attention is given to keeping the weight of the reciprocating parts as light as consistent with the required strength. The piston rods, main and side rods, crank pins and axles are of open-hearth steel.

The Baker valve gear operates piston valves of 14 in. diameter and a maximum travel of 6 in. A power reverse gear is provided, Alco Type E being used on the American locomotives and the Ragonnet on the Baldwin locomotives. All of these locomotives are fitted with stokers, those on the Baldwin engines being of the Duplex type and those on the American engines being of the Elvin type.

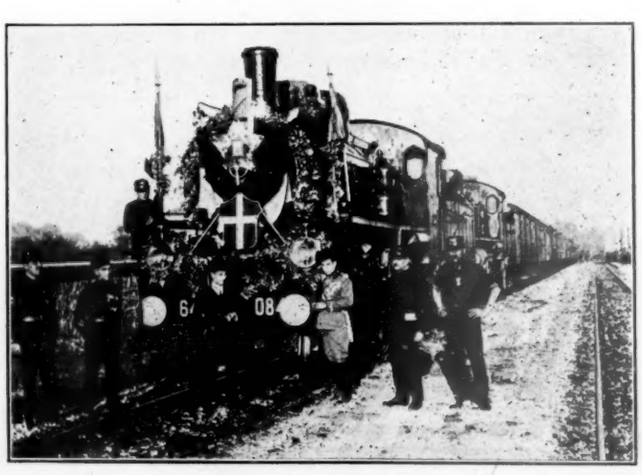
The following are among the other specialties used: Type A superheaters, Delta trailing trucks, Commonwealth frame cradles, Unit drawbars and radial buffers, Franklin adjustable wedges, Smith adjustable hub liners, Chambers throttle valves on American engines and railroad standard balanced type on Baldwin engines, Talmage drifting valves, Detroit lubricators, Hancock injectors, Nathan water columns, Vissering sanders, Pyle-National headlights, Butterfly fire doors, Okadee smokebox hinges, Hunt-Spiller cylinder and valve bushings, also piston and valve rings, King piston and valve steam packing and one 8½ in. cross compound air compressor.

The tenders are of the 8-wheel, Acme water-leg type and have a capacity for 8,000 gallons of water and 12½ tons of coal.

No official tests have been made with these new Mikado locomotives, although a number of very satisfactory preliminary runs were made to determine tonnage ratings. On one of these trial runs with increased tonnage up the Wilkes-Barre mountain from Pittston Junction, near Croxton, the train consisted of 60 loaded cars which gave a total tonnage of 3,856 tons back of the tender. This train was handled by one of the new Baldwin locomotives without a booster at the head end and two American helper locomotives with boosters, on the rear end. The train left Pittston Junction at 11:45 a. m. and arrived at the top of the mountain at 3:15 p. m., the distance being 20.5 miles, with a continuous grade of 61 ft. to the mile most of the way. Curves are compensated.

The previous Mikado locomotives have been rated at 950 tons on this grade, or 2,850 tons for three engines. It will be noted that on the trial where two of the engines were equipped with boosters, the tonnage handled was 1,006 tons in excess of the rating for the previous Mikado locomotives.

On another trial run, with a single locomotive equipped with a booster, between Pittston Junction and Mountain Top, the train consisted of 20 loaded coal cars, which gave a total tonnage back of the tender of 1,453 tons. This train left Pittston Junction at 12:10 p. m. and arrived at the top of the mountain at 4:15 p. m. The actual running time was 2 hr. 25 min., which corresponds to an average speed of a little more than 8 miles per hour.



International

Italy's Premier Travels in State—Train on Which Mussolini Recently Rode from Rome to Bologna

Six Reports Review Transportation Phases

Committees Appointed by Chamber of Commerce of U. S. Make Recommendations for National Policy

WASHINGTON, D. C.

REPORTS OF SIX COMMITTEES appointed by President Julius H. Barnes of the Chamber of Commerce of the United States early in the year to make a disinterested study of various phases of the transportation problem as the basis for discussion of a national policy of transportation development at a National Transportation Conference to be held probably early in December were made public this week. The reports are those on "Governmental Relations to Transportation," "Railroad Consolidation," "Relations of Highways and Motor Transport to Other Transportation Agencies," "Development of Waterways and Co-Ordination of Rail and Waterway Service," "Frieght Rates," and "Taxation of Transportation Agencies."

Amendment of Transportation Act Opposed

It is interesting to note that in general the recommendations from various committees do not depend mainly on legislation to make them effective and the report of the committee on governmental relations to railroad transportation says that "Congress should be urged to make no change in any important provision of the transportation act until it has had a fair trial, which as yet it has not had."

Report of Committee on Governmental Relations

As indicating the magnitude of the transportation problem, the Committee on Governmental Relations estimates upon the basis of studies made by a majority of the Class I railroads that there will be an increase of 25 per cent in passenger traffic and 33⅓ per cent in freight traffic on the railroads within the next 10 years and that to provide facilities and equipment for this increase will require an expenditure of $7,870,000,000.

An Estimate of Future Traffic Growth

In making its estimates of probable future increase in traffic the committee has kept well within conservative limits. Nor does it take into account the prospective expansion in other transportation fields—the rapidly growing use of motor transport, the hundreds of millions expended annually upon the highways, nor the potential development of waterways to which some large shippers are turning their attention. The $7,870,000,000 is said to be the minimum amount of new capital that must be forthcoming if the railroads are to keep pace with the rising tide of traffic.

In more specific terms the estimated growth of passenger traffic will be from 40,000,000,000 passenger-miles in 1923 to 50,000,000,000 in 1933, and of freight traffic from 420,000,000,000 revenue ton-miles to 560,000,000,000. To handle this increased traffic the railroads must add to their present equipment in the next decade 38,350 miles of track, 13,200 locomotives, 725,000 freight cars and 12,300 passenger cars.

"This estimated increase in capital expenditures," the committee explains in its report, "will provide only for the additional facilities needed to enable the railroads to handle the probable increase in business. In addition it will be necessary to secure the funds required for elimination of grade crossings, installation of automatic brake control and other similar improvements which render the service safer and better but do not add to the ability of the roads to handle increased traffic."

Members of the Committee

The chairman of the committee is George A. Post, president of the George A. Post Company of New York. The other members are: W. D. B. Ainey, chairman, Pennsylvania Public Service Commission, Harrisburg; Thomas C. Atkeson, Washington representative, National Grange, Washington; O. E. Bradfute, president, American Farm Bureau Federation, Chicago; Roy D. Chapin, chairman of the board, Hudson Motor Car Company, Detroit; W. R. Cole, president, Nashville, Chattanooga & St. Louis, Nashville; Samuel O. Dunn, editor, *Railway Age*, Chicago; Joseph S. Frelinghuysen, president, Stuyvesant Insurance Company, New York; Howard Heinz, president, H. J. Heinz Company, Pittsburgh; Walker D. Hines, attorney-at-law, New York; Hale Holden, president, Chicago, Burlington & Quincy, Chicago; Edwin T. Meredith, publisher, Successful Farming, Des Moines; Edwin B. Parker, umpire, Mixed Claims Commission, United States and Germany, Washington; L. E. Sheppard, president, Order of Railway Conductors, Cedar Rapids; Lewis B. Stillwell, consulting engineer, New York; Samuel M. Vauclain, president, Baldwin Locomotive Works, Philadelphia; Paul M. Warburg, International Acceptance Bank, New York; Daniel Willard, president, Baltimore & Ohio, Baltimore.

What policy may be pursued by the government to the end that these additional facilities may be provided and an adequate national system of transportation built up to meet rapidly expanding needs is the subject to which the committee devotes its report. Having considered it from the composite viewpoint of the carrier, the shipper, the employee and the public, it formulates its findings and recommendations in the following conclusions:

Expenditure of $7,870,000,000 Needed in Next Ten Years

1. Records of past growth of railroad traffic, as well as the increasing population and increasing per capita use of transportation in the United States, indicate a probable increase of at least 33⅓ per cent in freight and 25 per cent in passenger traffic on the railroads in the next ten years. Based on reports of individual studies made by a large majority of the Class I railroads, it is estimated that the improvements and additional facilities required during the next ten years to handle the expected increase in traffic will cost at least $7,870,000,000, besides the amounts that will be spent for the improvement of the existing service to render it safer and better. To provide for the necessary improvement and expansion of the railroad system of the United States constitutes the chief problem to be met in considering governmental relations to railroad transportation.

2. Private ownership and operation of railroads in the United States is in accord with the American economic system and the genius of the American people. The railroads should continue to be privately owned and operated under a comprehensive system of government regulation.

3. Railroad regulation in the United States should follow the principle of protecting the public interest and preserving the advantages of competition under fair conditions, at the same time seeking to give a fair return to capital and fair wages to employees.

Federal Statutes Need Not Restrict Management

4. The existing federal statutes need not and ought not injuriously restrict initiative or interfere with effective railroad management; the regulations under such statutes may at times

limit too greatly the freedom of operation of railroad management, but the remedy in such instances should be found in appeal to the administrative bodies charged with enforcement of the statutes rather than in effort to have the statutes amended. Inasmuch as the state and federal commissions are developing, year by year, more effective methods of co-operation with one another, it may be confidently expected that state laws and regulations, and those of the federal government, will be brought into such harmonious alignment that there will be no laws or regulations that will work against the general public interest, by unnecessarily hampering the railroads and seeking undue local preference.

5. The federal and state governments should consistently follow the principle of regulating the railroads through properly constituted administrative agencies rather than by legislation dealing with specific problems such as rates, practices and other matters involving railroad operation and management.

6. Transportation development cannot be adequate unless railroad credit is upon a sound and stable basis. Congress has accordingly prescribed a rule of rate making, section 15a of the transportation act, requiring that railway rates in each rate district shall be fixed to give a fair return upon the aggregate value of railway property devoted to the public service, and that in determining what is a fair return, the Interstate Commerce Commission shall give consideration to the transportation needs of the country and the necessity of adequately enlarging railroad facilities. This law is based on sound principles and is formulated along practical lines.

7. The Interstate Commerce Commission, under its authority to revise the rate of return from time to time, has decided that 5¾ per cent upon the aggregate value of railroad property devoted to the service of the public constitutes a fair return. Experience has not yet shown whether or not this percentage will be adequate to restore railroad credit. During the last decade the average returns have been far below 5¾ per cent, reaching this figure in only one year, 1916. As a result, railroad credit has been so impaired that few companies have been able to market their stocks. Investments in railroads during this period have been mainly in bonds, equipment trusts and other fixed interest-bearing securities, and in many cases, the proportion of these securities as compared with stocks, has become dangerously large. Correction of this condition will depend upon the adequacy of the return actually earned by the railroads, as compared with the return obtainable from investments in other industries, and upon the establishment of more general confidence in the continuity of a sound policy of rate regulation.

Recapture Clause Favored

8. The transportation act provides for recapture by the government of one-half of the surplus above 6 per cent that any railroad may earn. This provision seems necessary to promote the liberal policy of rate regulation needed to permit railroad development adequate to the public need without giving any carrier excessive profits.

9. Railroad valuation is essential to the successful regulation of railroad rates. The work of railroad valuation carried on by the Interstate Commerce Commission during the past ten years, is nearly finished, and everything should be done to assure its completion at the earliest practicable date.

10. It should be emphasized that the rule of rate making in section 15a of the transportation act is neither a railroad guaranty nor a cost-plus arrangement. In case a railroad or group of railroads fails to earn the fair return fixed by the commission, the deficit is not made up by the government. What any railroad is able to earn under the rates prescribed for each rate making district is dependent upon its own efficiency and efforts, so that competition in service and in reduction of costs is fully maintained.

11. In the development of rate regulation in the United States, the Interstate Commerce Commission has been given practically complete control over railroad rates. It is desirable, in the public interest, that the commission should have this power and the corresponding responsibilities. This complete control, made effective through the power to suspend rates, gives a desirable measure of stability to railway rates, at the same time leaving with the commission the responsibility for prompt rate adjustments when required. Similarly, the power conferred upon the Interstate Commerce Commission to correct intrastate rates that discriminate against interstate commerce is desirable in order that there may be an undivided responsibility for the adequacy of railway rates.

No Change in Labor Provisions

12. There should be no change in the labor provisions of the transportation act unless some plan should be evolved which, in the public interest, should be recognized as clearly superior to the plan now in force.

13. There should be no immediate change in the law whereby there would be assigned to any other department or bureau administrative duties now assigned to the Interstate Commerce Commission such as regulation of the issuance of railroad securities, valuation of railroad property, authorization of railroad consolidations and other powers of lesser importance.

14. All of the different interests affected by transportation should be urged to aid the government in its efforts to perfect the administration of existing transportation laws, to increase the efficiency of federal and state regulatory commissions and to promote co-operation between them.

15. Congress should be urged to make no change in any important provision of the transportation act until it has had a fair trial which as yet it has not had.

Voluntary Rather Than Compulsory Consolidation Recommended

Railroad consolidation through the voluntary action of the railroad companies rather than under the spur of compulsory legislation by Congress is advocated by the Committee on Railroad Consolidation. The grouping of railroads into large competitive systems is held by the committee to be merely the completion of the normal economic process begun many years ago but checked by the enactment of anti-trust laws. The committee believes that with the removal of these restraints and fair rate regulation, which will restore the confidence of those who direct the administration of railroads, consolidation will be resumed and the end aimed at by the transportation act attained in the course of natural economic development.

Members of the Committee

The chairman of the committee is Carl R. Gray, president of the Union Pacific. The other members are: Henry Bruere, fourth vice-president, Metropolitan Life Insurance Company, New York; J. A. Carpenter, president, Kansas City Paper House, Kansas City; Clyde Dawson, Dawson & Wright, Denver; W. N. Doak, vice-president, Brotherhood of Railroad Trainmen, Washington; Howard Elliott, chairman, Northern Pacific Railway, New York; John E. Oldham, Merrill, Oldham & Co., Boston; H. A. Palmer, editor, Traffic World, Chicago; Samuel Rea, president, Pennsylvania, Philadelphia; C W. Simmons, vice-president, Winchester-Simmons Company, St. Louis; A. W. Smith, special counsel, U. S. Railroad Administration, Washington; John P. Wallace, editor, Wallace's Farmer, Des Moines; Thomas E. Wilson, president, Wilson & Co., Chicago.

The principle of consolidation is strongly endorsed by the committee. Better assurance of an adequate and efficient transportation service, simplified rate regulation, economies in construction, maintenance and operation, improved car service and the preservation of competition are enumerated as some of the advantages to be derived from it by the public. The committee also holds that the strong and weak roads can be brought together without injustice to either on a fair basis of value and with due consideration of the earning capacity, property values and the special conditions surrounding each railroad. Its findings it summarizes in the following conclusions:

Summary of Conclusions

1. The transportation act of 1920 was intended to make possible the completion of the normal process of railroad grouping which began more than 70 years ago, but has in recent years, been largely suspended through the operation of the anti-trust laws and through the restricted returns to the carriers. Some of the consolidation provisions of the act have been so interpreted, however, as to prevent or delay consolidations and thus far little has been accomplished towards reducing the 1,600 or more operating and lessor railroad companies, essential to the existing transportation system.

2. The act protects the public interest by prescribing certain definite principles to govern railroad consolidation on a nation-wide scale and by placing in the Interstate Commerce Commission complete control of the further grouping of railroads.

3. The provisions of the transportation act require that further consolidations of railroads must be approved by and be in harmony with, a complete plan of consolidation to be adopted by the Interstate Commerce Commission. This plan should be completed as early as practicable and every facility to that end should be afforded the commission if Congress adheres to this condition precedent.

4. The advantages to the public that may be expected from a further systematic grouping of the railroads are those which have, in large part, been obtained by many of the existing systems. They include:

(a) Development of a limited number of more uniformly strong and stable railroad systems, thus giving the public better assurance of adequate and efficient service at reasonable rates and fares.

(b) Simplified and improved rate regulation, made possible through more uniformity in the strength and the traffic characteristics of the several consolidated systems in each rate district, and permitting more ready readjustment in accordance with the economic needs of the various sections of the country and classes of traffic affected. This will not, however, adversely affect the existing rate basing points or the established principles of rate making.

(c) Economies in construction, maintenance and operation which, while sometimes exaggerated, will nevertheless be important.

(d) Improved car service with wider movement of cars on their home systems, greatly lessened necessity of car interchange and the utilization of more direct routes, better grades and shorter hauls.

(e) Preservation of competition in rates subject, as at present, to the limitations imposed by government regulation, and maintenance of competition in service or often the enhancement of competition through rivalry between systems of relatively equal strength.

5. The creation of large consolidated systems will bring up certain management problems. However, experience in other American industries, as well as in some of the larger existing railroad systems, has demonstrated that there are no conditions inherent in large organizations that prevent them from attaining the standards of efficiency of which small units are capable.

6. Railroads can be consolidated without injustice to the owners of either the strong or the weak roads and without injustice to the public if the roads are brought together on a fair basis of value and after due consideration of demonstrated earning capacities, property values, and the special conditions surrounding individual properties. The public interest in the financial arrangements will be protected, as prescribed by the act, through the limitation on capitalization, and the provisions to insure reasonable rates and a reasonable investment return.

7. With the removal of legal obstacles and with the change that has taken place in public sentiment it may be expected that railroad consolidation will be continued, provided there is such fair and liberal application of the statutory principles of rate regulation as will promote confidence and initiative in railway administration, and provided the general principles followed in passing on proposed conditions are in harmony with the line of natural evolution in the grouping of railroads.

8. A full opportunity should be given the carriers to consolidate by voluntary action before Congress considers making railroad consolidation compulsory. Compulsory consolidation involves so many constitutional questions and is such an intricate and involved proposition, that it might hinder, rather than promote consolidations. In any event it should not be resorted to until there has been full opportunity for voluntary consolidation.

9. The proposed consolidated companies should preferably be chartered by the federal government, thus simplifying regulation and placing all companies on an equality as to corporate powers and responsibilities.

10. No changes in the consolidation provisions of the transportation act are recommended at the present time, but the experience already obtained in endeavoring to work out consolidations may indicate the need of supplementary legislation in relation to (a) joint ownership of lines, (b) exchange or re-issue of the securities of existing corporations instead of creating new consolidated corporations, (c) authority for dealing with minority stockholdings, (d) exemption from taxes on security issues or exchanges involved in consolidations or mergers provided they do not exceed at par the par value of the existing stocks and bonds of the present companies, and (f) the creation of suitable agencies to promote and supervise the working out of consolidations.

The Weak Roads

"Weak roads, the committee finds, seriously imperil the whole transportation system upon which the prosperity of the country depends. The situation resulting from the presence of financially weak roads among the railroad systems in the United States," it says in its report, "is of serious import to the public. When the railroads were taken over by the government as a war measure, about 40 per cent of the systems were financially weak. Their fixed charges had become disproportionately large as compared with their net operating revenues. Some of these companies are now in a better condition, but many of them are not. The increases in rates and gross revenues have been absorbed by enlarged operating expenses and taxes, and the situation as a whole is not greatly improved and cannot permanently improve with respect to weak roads without readjustment of their fixed charges as related to their net earnings. This situation must be met by carrying out a policy that will deal effectively with the problem of the weak roads without impairing the credit of the strong roads."

"The wise course," the report continues, "both for the public and for the carriers, is to bring about, if possible, the financial reorganization and rehabilitation of the weak roads and their incorporation in strong consolidated systems. At the same time the plan should be such that it will not unduly burden the strong roads to enter into the consolidations. Naturally, this is not to be accomplished by magic or legerdemain. Two railroad systems of differing financial strength can come together only upon the basis of the relative values of the two properties—actual values as determined mainly by earning capacity."

Co-Ordination of Rail and Water Transportation Recommended

Practical steps to restore the rivers and canals of the country to a place of importance in the general system of transportation are proposed by the Committee on the Development of Waterways and the Co-ordination of Rail and Water Service.

The linking together of rail and water transport by the establishment of joint routes and rates, the adoption of a comprehensive plan and program of river improvement and canal construction to be recommended by the chief of engineers of the Army and the continuation of the government barge lines on the Mississippi and Warrior rivers to determine their feasibility as commercial enterprises are some of the measures suggested. The report also carries an appeal to commercial bodies to use their influence in bringing about conditions favorable to the development of waterway traffic.

Members of the Committee

The committee on waterways includes in its membership representatives of the railroads as well as water carriers, farm organizations and shippers. The chairman is W. L. Clause, of the Pittsburgh Plate Glass Company. The members are: Major General Lansing H. Beach, chief of engineers, War Department, Washington; Charles P. Craig, vice-president at large and executive director, Great Lakes-St. Lawrence Tidewater Association, Duluth; Edwin C. Gibbs, Cincinnati; Emory R. Johnson, dean, Wharton School of Finance and Commerce, University of Pennsylvania, Philadelphia; C. H. Markham, president, Illinois Central, Chicago; T. C. Powell, vice-president, Erie, New York; M. J. Sanders, Leyland Lines, New Orleans; Harvey J. Sconce, Sidell, Illinois; A. B. Shepherd, vice-president, Interstate

Steamship Company, Pittsburgh; G. A. Tomlinson, president, Duluth Steamship Company, Cleveland; General E. H. Woods, president, Kentucky Farm Bureau Federation, Lucas, Ky.

At the outset of its report the committee points out that although there has been a rapid growth of population and an even more rapid growth of commerce, the inland waterways of the country, once its main reliance, are in general carrying little more traffic than they did twenty-five years ago. Water transportation, the committee holds, is cheaper and better under certain conditions, but because of its natural limitations the railroads must constitute the backbone of the transportation system.

"Our transportation demands," the report continues, "have practically doubled during the past fifteen years, and are certain to increase much more rapidly than the population of the country. Since the outbreak of the World War, owing to periods of abnormal traffic, abnormally high operating costs and low net earnings, and other deranging factors, the railroads have at times been unable to meet the traffic demands placed upon them, and business has suffered in consequence. Normal conditions are now returning, and during the past six months the railroads have handled, practically without car shortage, more traffic than in the corresponding months of any previous year. However, this has in part been due to favorable weather and other conditions, and it is none the less desirable not only to develop water transport where it is cheaper and better than rail transport, but also to supplement rail with water transport as a safeguard against recurrence of transportation shortage. With our transportation needs growing so rapidly, it is of the utmost importance that every facility making for cheap, safe, reliable and convenient transportation be developed."

Having considered the problem of water transportation in this light the committee announces the following conclusions:

Conclusions

1. While the inland waterways used in the movement of traffic usually constitute routes alternative with railroads, and are thus competitive with some railroads, an important function of such waterways is to supplement and complement the railroads as the larger part of the country's transportation system.
2. Through rail-and-water and water-and-rail routes and rates should be established when they are in the public interest, and when under equitable divisions each transportation agency can make a fair return on its investment.
3. Such waterway rates as are regulated by public authority, as part of through rail-water and water-rail rates, should be fixed primarily with a view to giving the public an equitable use of both agencies of transportation.
4. Common-carrier rates on inland waterways should normally be lower than railroad rates for similar services, the capital costs and the haulage costs being ordinarily less for the carrier by water.
5. The nation, states, municipalities and commercial organizations should seek to establish conditions favorable to the establishment and maintenance of services on inland waterways whenever such services are economically desirable and in the public interest.
6. In order that Congress may more effectively and intelligently determine its policy regarding the general improvement of navigable channels upon waterways as a means of commercial transportation, the committee recommends that the desirability be urged upon Congress of giving the Secretary of War the necessary authority and funds to operate the transportation services of the government on the Mississippi and Warrior rivers along the lines of good commercial practice.
7. Projects for the improvement of certain important waterways, such as the Mississippi system, have already been authorized by Congress, while others, notably the St. Lawrence river between Lake Ontario and Montreal, await congressional or international action. Without delaying such desirable projects, this committee recommends that Congress direct the corps of engineers of the United States Army to consider the waterways of the country as a whole and in their relation to other transportation agencies, and to recommend a definite development plan and a schedule of priorities.

The country, the committee holds, can no longer complacently permit waterway traffic to decline and depend solely upon rail transportation to meet its requirements. "There is an increasing realization," the report continues, "of the need for maximum economy and efficiency in transportation as in other fields, and of the wastefulness of permitting a means of transportation often potentially the most economical to remain undeveloped through failure to provide the necessary facilities and the necessary co-ordination with other carriers."

As evidence of this reawakening of interest in water transportation the committee points out that the steel industry is greatly extending its use of water transportation through the shipment of finished products on the Ohio and Mississippi rivers and intracoastal canals and that the United States Steel Corporation alone is planning to move eleven million tons annually by water.

Recognizing that water carriers cannot live on a traffic that begins and ends on the waterway they traverse, the committee proposes that compulsory measures be taken to link water with rail traffic. "Practical and positive steps," it says in its report, "must be taken to bring about that measure of co-ordination of waterways and railroads which is required in the interest of the waterways and the public. It is not to be expected that the railroads will of their own accord enter into relations with carriers by rivers and canals. The railroads, in many cases, still regard the inland waterways as competitors, as rivals seeking to obtain traffic that would otherwise move by rail and add to the revenues of the railroads. It should be the policy of the public, of legislation and of government regulation to require full co-ordination between rail and water carriers, and, so far as practicable, to substitute friendly co-operation in place of hostile competition."

Mississippi and Warrior River Services

Operation of the government-owned barge lines on the lower Mississippi and Warrior rivers for a period of five years to determine the feasibility of such projects under private enterprise is recommended. The report also characterizes the St. Lawrence as "an important avenue of commerce for a large section of our country."

"These two services," the committee says, referring to the government barge lines, "are still being maintained for the purpose of showing the value of barge-line transportation under present-day conditions. It is the hope of the government to determine by this experiment whether and under what conditions river transportation can render a useful and profitable service in competition with the railroads for port-to-port traffic and, in co-ordination with the railroads, for traffic over joint rail-and-barge and rail-barge-and-rail routes. As soon as such services are shown to be practicable and profitable it is expected that the government will endeavor to sell out its lines to private carriers.

"It is too soon to decide what the results of this experiment in government operation will be. Thus far the Warrior service has been maintained at a loss. The Mississippi service has shown a deficit for most of the period of operation, but there are prospects that this service may soon prove to be definitely profitable. The experiment, however, to be of value —to be at all conclusive—must be carried on for a further period of at least five years.

"In order that Congress may be enabled more effectively and intelligently to determine its policy regarding the general improvement of navigable channels upon waterways as a means of commercial transportation, the committee recommends that the desirability be urged upon Congress of giving the Secretary of War the necessary authority and funds to operate the transportation services of the government upon the Mississippi and Warrior rivers along the lines of good commercial practice; if desirable, by the creation of a transportation corporation.

The committee points out the possibility of constructing canals at numerous places to connect rivers with each other or with the Great Lakes, and advocates the early comple-

tion of the projected improvement of the Mississippi and its tributaries, particularly the Ohio.

"Another important proposal," the report continues, "is to deepen the St. Lawrence river between Lake Ontario and Montreal to accommodate vessels that can navigate the Great Lakes and load and discharge at the lake ports, and at the same time to develop the available water power. Negotiations regarding this proposal are in progress with the Dominion government. The St. Lawrence obviously forms an important avenue of commerce for a large section of our country, and its development along sound economic lines merits the most careful attention on the part of the government.

"The question as to what, apart from these unfinished projects, shall be done with the country's natural waterways—what further rivers shall be improved and what canals shall be constructed—should be decided after ascertaining to what extent inland waterways can be given channels that can be regularly used by barges and power vessels of such types and sizes as to enable the waterways to be of real commercial service in lessening the present costs of transportation or increasing the total of available efficient transportation facilities. The country needs more transportation, and will need an increase in facilities year by year. It will need the waterways, if for a given investment as great returns in services rendered can be obtained from waterways as from other means of transportation."

Relation of Motor Transport to Other Transport Agencies

A comprehensive plan for linking organized motor transport with the railroads in the development of a balanced national system of transportation is outlined in the report of the Committee on the Relation of Highways and Motor Transport to Other Transportation Agencies.

Sweeping changes in prevailing methods of handling and distributing freight are proposed. Store-door collection and delivery to relieve congestion within the crowded terminal areas of large cities, the use of organized and responsible motor transport to relieve the railroads of various forms of uneconomical service, including the unprofitable short haul, the wider use of self-propelled railway cars and the extension of passenger bus service to supplement existing facilities are recommended.

To pave the way for these changes in the public interest the committee suggests the regulation of common carrier operations of motor vehicles by the federal and state commissions which have supervision of rail and water carriers, and the systematic development of highways in response to general traffic needs.

The Committee

The committee, of which Alfred H. Swayne, vice-president of the General Motors Corporation, is chairman, includes railway traffic officials, officers of farm and labor organizations, representatives of the motor industry, motor haulage companies, water carriers and the shipping public.

The members of the committee, besides the chairman, are: W. J. L. Banham, general traffic manager, Otis Elevator Company, New York; L. W. Childress, president, Columbia Terminals Company, St. Louis; D. C. Fenner, engineer and manager, public works department, Mack Trucks, Inc., New York; Gerrit Fort, vice-president, Boston & Maine, Boston; Philip H. Gadsden, vice-president, United Gas Improvement Company, Philadelphia; W. H. Lyford, vice-president and general counsel, Chicago & Eastern Illinois, Chicago; Ralph H. Matthiessen, president, Motor Haulage Company, New York; John D. Miller, president, National Milk Producers' Federation, New York; H. H. Raymond, president, Clyde Steamship Company, New York; Arthur T. Waterfall, vice-president, Dodge Brothers, Detroit; Henry J. Waters, editor, Weekly Kansas City Star, Kansas City; and Robert C. Wright, general traffic manager, Pennsylvania, Philadelphia.

As a result of its study the committee announces the following conclusions:

Conclusions

1. The best interests of the public and the rail, water and motor carriers lie in co-operation between the various agencies of transportation rather than in wasteful competition.

2. The greatest opportunity for co-operation is at the points where the capacity of the railroads is most limited and expansion is most difficult and costly; that is, in the terminal areas of our great cities.

3. Store-door delivery by motor truck, which would relieve congestion in these terminal areas and greatly increase the capacity of the freight stations, is undoubtedly the greatest contribution which can be made to the solution of the terminal problem.

4. Organized motor transport can also relieve the railroads of various forms of uneconomical service, such as trapcar service, switching between local stations and short-haul shipments within the terminal area. This will reduce yard congestion and release many cars for more profitable line haul.

5. To secure the fullest benefit from this organized motor transport, will require the utilization and further development of modern technical equipment, such as demountable bodies, trailers and semi-trailers, containers and container cars, and mechanical handling appliances.

6. Outside of the terminal areas there are distance zones, varying in different localities and for different commodities, in which one type of carrier, the motor for short haul and the railway (or waterway) for long haul, is clearly more economical than the other, and intermediate zones in which competition is inevitable. The motor vehicle also has a wide field where there is no other agency available. Motor trucks and buses should be used to supplement the facilities of existing common carriers.

7. It is to the public interest, as well as to the interest of the respective carriers, that the economic limitations of each type of carrier be recognized, that the railroads be permitted to discontinue unprofitable service to which the motor is better suited, and that the motor abandon its efforts to handle general traffic over excessive distances. However, because of the public interest which affects the operation of railroads, they have performed and must continue to perform some service which is unprofitable, chiefly in territory where the performance of highway transportation would also be unprofitable. If the railroads are to be deprived of a substantial share of their more remunerative traffic through unfair and, to the trader, uneconomical methods, the traffic remaining to the railroads must take on an added burden in the form of higher rates or impaired service. In all cases where the railroad can handle traffic with greater or equal efficiency, all factors being considered, the public interest requires that it be allowed to do so. Unprofitable steam railroad service can in some cases be successfully replaced by the use of self-propelled railroad motor cars.

8. To insure to the public continuity and reliability of service, sound financial organization of motor transport is necessary, as well as public regulation of common-carrier motor service.

9. Passenger bus transport should be so regulated as to secure the best service to the public, certificates of public convenience and necessity as already required in many states being a useful means of insuring reliable and continuous service. Rail lines can often advantageously extend or supplement their service by bus lines, and in states where this is now prohibited such restrictions should be abolished.

10. Regulation of traffic and of size, weight and speed of motor vehicles by states and municipalities having control should be made more uniform within states and as between states. Regulation of common-carrier operations of motor vehicles, including rate regulation, should be handled by the federal or state authorities, under the commissions which now control the operations of rail and water carriers.

11. Trunk highways in any area should be able to carry the normal vehicular traffic of that area, and, if the traffic economically justifies the use of especially heavy trucks, highways with stronger

subbases must be provided. This constitutes a problem requiring particular attention in the design of highway systems and in the regulation of traffic. In other respects present types of highways, present routes connecting principal centers of population and production, and the present trend in size, weight and speed restrictions of vehicles using highways show a rational system of highway development that should be continued.

12. Investigations now under way by the U. S. Bureau of Public Roads, state highway departments and other agencies to determine more fully the economic role of the motor vehicle should be continued.

The Relief of Terminal Congestion

"The congestion of transportation," the committee continues in its report, "today centers around the terminals of our great cities, and it is at these terminals that the railroads find the greatest difficulty in keeping pace with the public need. With hardly an exception the main tracks of our railroads have sufficient capacity for the movement of more freight than can be offered to them. With hardly an exception the railroads are constantly faced with a demand for more and better terminal facilities in the face of prohibitive real estate values and other stupendous obstacles to expansion. Here lies the greatest opportunity for the motor truck. By the use of motor transport the facilities of the terminals can be so expanded as greatly to increase their capacity.

"The general demand for more and better rail transportation is insistent, and the railroads are confronted by a serious dilemma. They must either add to their present terminal facilities or find a way to pass more freight through them. Enlargement or multiplication of terminal stations and team tracks in important terminal areas is practically impossible because of the prohibitive cost, objection of municipalities to the expansion of railroad holdings in congested areas, and furthermore the additional traffic congestion that would result from greater centralization of cartage operations in such areas.

"There are three principal directions in which the motor truck can serve to relieve the terminal situation:

"1. By organized cartage instead of the present go-as-you-please methods of receipt and delivery at the rail terminal; further than this, by store-door delivery, which is real completed transportation.

"2. By substitution of motor service for a part of the rail service.

"3. By complete elimination of certain rail service. This would cover intraterminal movement, such as movement between industries or different plants of the same industry within the terminal area, which would then be handled by motor truck."

Store Door Delivery Favored

Enumerating the advantages to be derived from a system of store door delivery the committee says:

The rail haul could begin or end at an outlying station, readily accessible to highway vehicles, thus avoiding the delay and expense of moving cars or freight through the terminal to some l. c. l. freight station in the congested district. It is clear that so long as the freight is collected or delivered at the door of the trader, shipper or consignee, it does not matter to him at what point it is transferred from rail to truck or truck to rail.

The railroads would be relieved of the necessity of maintaining expensive l. c. l. (less-than-carload) freight stations in the heart of the busy, and generally congested, business districts.

Street congestion would be reduced.

Shipments moving between large cities could be consolidated into fewer cars, thereby avoiding transfers and increasing the average loading of merchandise cars.

Motor Vehicles Should Pay for Maintaining Highways

That part of the burden of taxation for highways should be borne by the motor vehicle to place it on an equality with the steam and electric railways is recommended in the report of the Joint Subcommittee on the Taxation of Transportation Agencies.

Recognizing the motor vehicle as "an essential addition to the transportation agencies required in our modern economic life," the subcommittee lays down the principle that it should pay the cost of maintaining the improved highways it uses in as good condition as when they were built. At the same time the subcommittee points out that motor vehicle owners pay in the form of a wide variety of taxes—federal excise taxes, personal property taxes, income taxes and taxes on garages and other facilities—large sums which do not appear as segregated items.

Subcommitte on Taxation

The subcommittee on taxation consists of George A. Post, president of the George A. Post Company, of New York, chairman; A. J. Brosseau, president, Mack Trucks, Inc., New York; Roy D. Chapin, chairman of the board of the Hudson Motor Car Company; W. R. Cole, president of the Nashville, Chattanooga & St. Louis; Gerrit Fort, vice-president of the Boston & Maine; Philip H. Gadsden, vice-president of the United Gas Improvement Company, Philadelphia; W. H. Maltbie, chairman of the committee on special taxes, American Electric Railway Association.

After a study of the problem of taxation from the composite viewpoint of the steam and electric railways and the motor industry the subcommittee announces the following conclusions:

Conclusions

1. Each form of transportation should bear its fair share of the burden of public expenditure.

2. Taxation of common-carrier transportation agencies should be simplified as far as possible.

3. Taxes on regulated common carriers operated for hire should bear a definite relation to gross and net earnings rather than to invested capital.

4. This requirement can best be met in the case of steam and electric rail common carriers by the imposition of a gross-net tax in lieu of the present levies. Pending full regulation of the motor common carrier, such increases should be made in taxes now levied against it as will bring them an amount equitably proportionate to that which may be assessed against the other carriers.

5. The entire cost of maintaining the improved highways of the country should be borne from special taxes levied against the road user. Such taxes should be used for no other purpose.

6. Co-ordination of highway construction and maintenance under centralized administrative agencies is urged to eliminate waste and secure efficiency.

No attempt is made by the subcommittee to determine whether transportation is paying more or less than its fair share of the operating expenses of government. It confines its recommendations to the basis of taxation to be applied properly to rail and highway transportation.

Attention is called in the report to the enormous increase in taxation paid by transportation agencies in the last 10 years—in 1921 more than 8 per cent of the nation's tax bill of approximately $9.000.000,000. The steam railroads which, in 1913, paid $127,725,809 in taxes and $322,300,406 in dividends, in 1921 paid $275,128,134 in taxes and $298,511,328 in dividends. While taxes have gone up dividends have gone down. In 1920 and 1922 the taxes exceeded the dividends.

"In addition to the taxes levied against steam railroads in 1921, amounting to $277,154,940," the report continues, "the roads expended $756.413.691 in the same year for maintenance of way and structures, charging the sum to operating account. Electric railways paid $92.033,000 in taxes and imposts in 1921. In addition they paid approxi-

mately $101,000,000 for maintenance of way and structures, charging the sum to operating account. Motor vehicle owners, as one element in highway transport, paid in 1921 on the vehicles $75,000,000 in personal property taxes, $115,500,000 in special federal excise taxes, $147,000,000 in special taxes applied directly to the construction and maintenance of public highways, and in addition large sums in various municipal taxes, corporation and business income taxes and other property taxes for which no figures are available. Among these latter are included the taxes on garages and other facilities for 13,000,000 motor vehicles."

The subcommittee finds that out of a $653,844,823 tax charge for public highways in 1921, $183,000,000 was paid directly by the motor vehicle and the balance from general and miscellaneous taxation, to which the motor vehicle contributed largely.

"In the case of the steam and electric railways," the report continues, "the investment in roadway is a capital account, and returns on this investment are paid out of income, but on the other hand the steam and electric railways have certain franchise rights in the use of their roadway. By paying the cost of maintenance of the highways which it uses, the motor vehicle puts itself on an equality as to maintenance with the steam and electric railways, which pay for the maintenance of their own way and structures through direct charges to operation instead of by taxation.

"Your committee would not perform its full duty did it not recommend that all possible influence should be brought to bear to eliminate wasteful, extravagant or unnecessary expenditure from the highway program, which should always be subject to centralized and co-ordinated administration."

Readjustment of Relative Freight Rate Schedules

The committee on Freight Rates has reviewed the general rate situation in the United States, has made certain detailed studies regarding the features which appear to require earliest attention, and has endeavored to develop the principles that should govern the readjustment of freight rates in the United States, avoiding any attempt to pass upon local, sectional or class issues or technical questions which properly come within the jurisdiction of the Interstate Commerce Commission.

The committee offers the following conclusions:

1. Viewed as a whole, railroad rates in the United States are not unreasonably high, either as compared with pre-war rates in relation to general price levels or as compared with foreign rates. They have afforded the railroads an average rate of return considerably below that which the Interstate Commerce Commission, acting in accordance with the law, has determined as fair. They do not as a whole hinder the processes of production or distribution. The present problem is one of a better adjustment of relative rates—not a general reduction of all rates.

2. It cannot be claimed that the railroad freight rate structure of the United States has ever been organized on a scientific basis, or that it has ever been systematically revised with the purpose of eliminating disparities. The great economic changes incident to and resulting from the war have created additional disparities resulting from horizontal rate changes, from the dislocation of relative price levels and from increases in labor costs and terminal expenses which have borne with greater weight on some classes of traffic than on others. This situation renders a readjustment of relative freight rates of great immediate importance.

3. A survey of class rates shows a great lack of uniformity, either as between classes, between products, or between regions, except in certain limited areas. Unreasonable disparities exist between the rates in different states. Revisions of class rates in three important sections of the country are now in progress and early completion of these revisions is extremely desirable.

4. In the readjustment of freight rates, consideration should be given to basic principles of rate making and to particular conditions affecting each type of business, notably less-than-carload and light-and-bulky traffic as contrasted with heavy loading articles. Careful consideration shows that the revenue derived from the former types of business is unduly low as compared with that obtained from the latter type. This statement applies to goods moving under both class and commodity rates.

5. A readjustment of class rates (including less-than-carload rates) should result in a measurable increase in total revenue, limited chiefly by reason of the relatively small volume of business concerned. This increase in revenue will, however, be augmented by advances in certain commodity rates, which are often founded on class rates and will be realigned in accordance with class rate revision. Such proceeds should be applied to the reduction of commodity rates where needful. Any measure of relief afforded by these reductions, even if small in magnitude, will be a step in the right direction. Care should be exercised, however, that such reductions be not made a hardship to any particular railway system.

6. A serious railway rate problem has arisen from the recent rapid growth of intercoastal traffic through the Panama Canal resulting from the prevailing low ocean tonnage rates. The transcontinental railroads are seriously feeling the inroads of canal competition for the first time since the canal was built. It is the view of the committee that the public is entitled to the benefit of low rates due to the canal, and that the railroads should be allowed to readjust their rates to meet that competition, but without unjust discrimination against the intermediate sections of the country. The committee is further of the opinion that the railway carriers are entitled to know what competition they have to meet in this coastwise trade, which is restricted to American bottoms, and that the vessel lines concerned should be required to file their specific rates with the Interstate Commerce Commission.

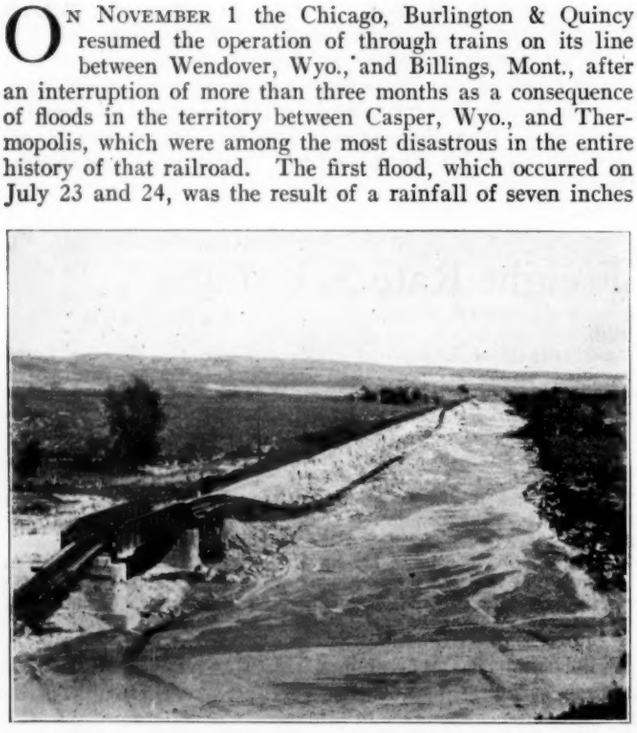
The committee included F. A. Delano, former president of the Wabash, Washington, D. C., chairman; H. M. Adams, vice-president, Union Pacific System, Omaha; Sydney Anderson, member of Congress, Washington, D. C.; Dr. Frank App, New Jersey Federation of County Boards of Agriculture, Trenton; Joseph M. Belleville, general traffic manager, Pittsburgh Plate Glass Company, Pittsburgh; B. Campbell, vice-president, New York, New Haven & Hartford, New Haven; Edward Chambers, vice-president, Atchison, Topeka & Santa Fe, Chicago; Archibald Fries, vice-president, Baltimore & Ohio, Baltimore; E. J. Frost, vice-president, William Filene's Sons Company, Boston; P. L. Gerhardt, vice-president, Bush Terminal Company, New York; Dwight B. Heard, president, Dwight B. Heard Investment Company, Phoenix, Ariz.; Frank F. Henry, Washburn-Crosby Company, Buffalo; G. H. Ingalls, vice-president, New York Central Lines, New York; Charles S. Keene, vice-president, American Tobacco Company, New York; Alexander Legge, president, International Harvester Company, Chicago; A. J. Lovell, vice-president, Brotherhood of Locomotive Firemen & Enginemen, Washington, D. C.; W. C. Maxwell, vice-president, Wabash, St. Louis; E. M. Poston, president, New York Coal Company, Columbus, Ohio; C. E. Spens, vice-president, Chicago, Burlington & Quincy, Chicago; A. R. Smith, vice-president, Louisville & Nashville, Louisville; P. C. Sprague, traffic manager, M. A. Hanna Co., Cleveland; Theodore F. Whitmarsh, president, Francis H. Leggett Company, New York; and J. G. Woodworth, vice-president, Northern Pacific, St. Paul.

FORTY PORTRAITS of 40 girls constitute a principal feature of the last issue of the Pennsylvania News for the Central Region; all of them telephone operators in the two exchanges which are run for the railroad company in the Union Station at Pittsburgh; "Grant 6,000" and "Grant 3,600"; known respectively as GO and OD. There are 21 operating positions in these two exchanges, and these communicate with 800 local lines and about 1,000 stations.

C. B. & Q. Recovers From Severe Floods

Heavy Rains in June Destroy Large Section of Line and September Storms Repeat Destruction

On November 1 the Chicago, Burlington & Quincy resumed the operation of through trains on its line between Wendover, Wyo., and Billings, Mont., after an interruption of more than three months as a consequence of floods in the territory between Casper, Wyo., and Thermopolis, which were among the most disastrous in the entire history of that railroad. The first flood, which occurred on July 23 and 24, was the result of a rainfall of seven inches



The River Cut a New Channel Alongside the Railway Embankment for Two Miles

in five hours, which, because of the large area covered, produced an unprecedented discharge from the various drainage areas, practically destroying the railroad for a distance of 18 miles between Bonneville and Lysite and causing numerous washouts at various other points over a stretch of about 65 miles. This storm was followed by another on September 27 and 28 and a third on October 9 which destroyed a large part of the reconstruction work of the preceding two months, thereby adding greatly to the cost of rebuilding the railroad and delaying the date of traffic resumption by more than a month. So severe was the damage to certain portions of the line that 18 miles was rebuilt on a new location rather than to attempt permanent reconstruction on the original site.

Fortunately for the Burlington the interruption of through traffic on the Wendover-Billings line did not result in the loss of much business, owing to the fact that the road has an alternate line to Billings via Alliance, Neb., over which the traffic could be routed while the first named route was out of service. Therefore, the storm in September was particularly disastrous for the Burlington since it was responsible also for an enormous runoff in the Powder River valley which, sweeping northward down that stream, destroyed a bridge on the Billings-Alliance line at Arvada, Wyo., and interrupted traffic on that line for eight days, during which period Billings was entirely isolated from rail connection with the rest of the Burlington system. The same storm was also responsible for a local flood in Cole creek, about 15 miles east of Casper, Wyo., which resulted in the disastrous train accident reported in the *Railway Age* of October 6, page 634. All told, the flood troubles suffered by the Burlington in this territory have resulted in a physical property loss to the railroad of considerably over a million dollars.

The line of the Burlington from Wendover to Billings, commonly known as the Big Horn Basin line, is one of the most recently constructed portions of that system. It was completed in 1913 as a part of a projected low grade through line extending from Billings, Mont., to Metropolis, Ill., but its principal function is to afford a direct connection between Denver and the Northern Pacific and the Great Northern. Commencing at Billings the line follows up the drainage of the Big Horn river and its tributaries, the Badwater river and Alkali creek, to Arminto, where it crosses a watershed and descends into the valley of Casper creek, a tributary of the North Platte river, which it follows to Wendover and Guernsey.

The flood damage resulting from the storms of the past summer extended over a large part of the 65 miles between

A 650-ft. Gap in the Center of a 40-ft. Embankment

Thermopolis and Arminto, but was largely concentrated along the valley of the Badwater river between Bonneville and Lysite. This 18-mile section involved 11 crossings of the river, all of which suffered partial or entire destruction. In some cases the damage consisted primarily of the washing out of the approaches. In other instances portions of the substructure were undermined, while in three cases the superstructure and substructures were washed away. But of still more serious nature was the effect of the flood on the railway roadbed throughout the entire length of the river valley, a relatively flat basin having a cover of alluvial soil averaging about 13 ft. thick overlying a shale base. So severe

was the flood discharge, both as to volume and intensity, that the entire topography of the valley bottom was changed. New channels were cut, old ones were filled up and in some portions the subsiding waters left deposits which raised the river bottom several feet above its previous level, so that the railroad grade and the valley are now subject to overflow with every recurring period of moderately high water.

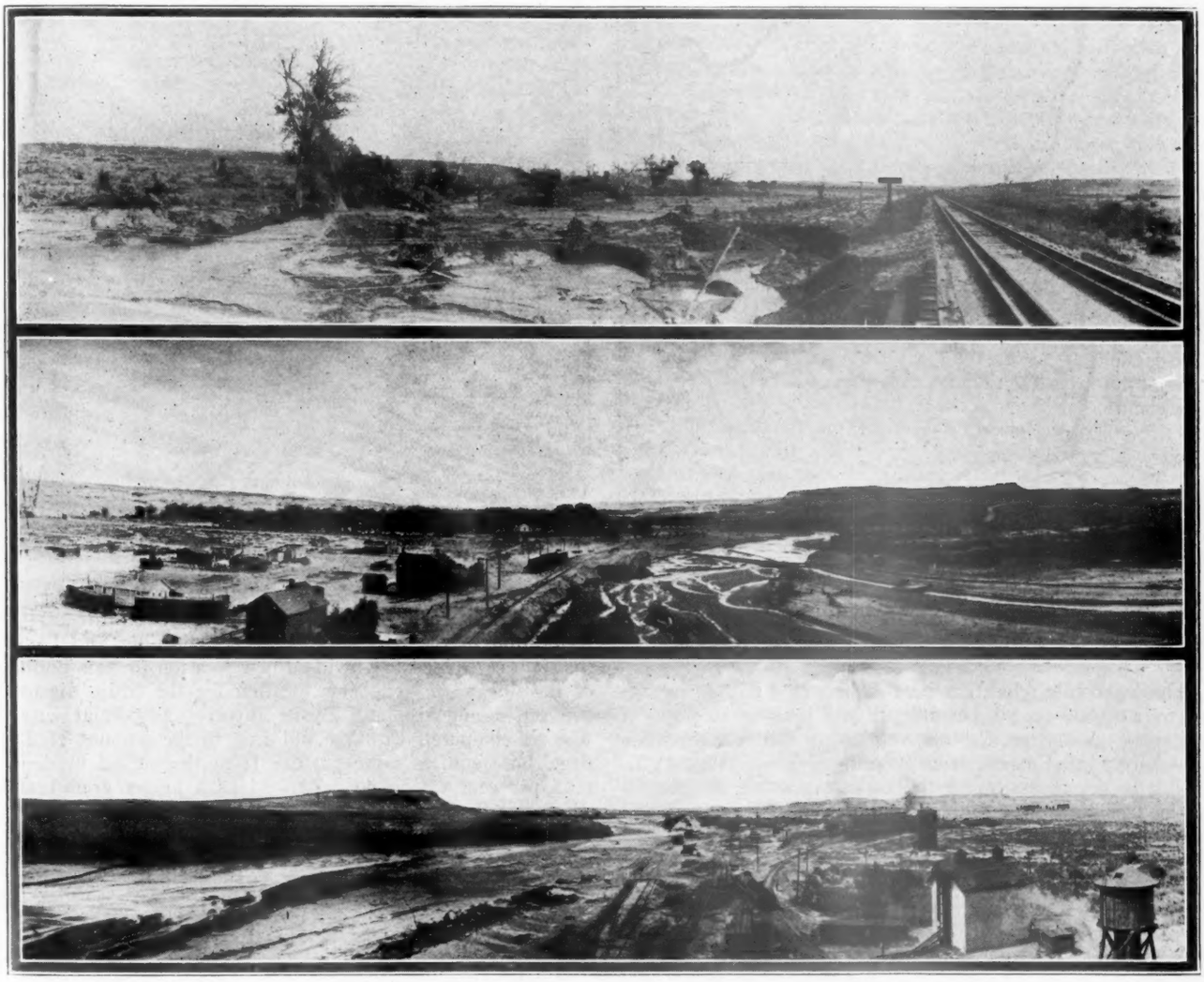
In one instance a channel change resulted in washing away a 40-ft. embankment for a length of 650 ft. At another place, the river cut a new channel along the railway embankment for a distance of two miles, carrying away one side of the embankment to beyond the center line so that long stretches of the track fell into the channel. Heavy damage was also done to the Burlington's terminal at Bonneville, where the entire terminal area was inundated and both ends of the yard were washed away.

Following the flood in July efforts to organize forces and dispatch construction equipment were undertaken rapidly. A. W. Newton, chief engineer of the Burlington system, and other engineering and operating officers of the road made an immediate inspection of the affected territory. This was attended with great difficulty because all of the highways in the valley had also been destroyed, making it necessary to cover the entire territory on foot.

When the line was built in 1912 and 1913, the favorable topography of the bottom land in the Badwater River valley and the absence of any precedent whatever for floods like those of the present season naturally led to the adoption of a location following the lowlands of the valley all the way from the confluence with the Big Horn to the mouth of Alkali creek, but after an examination of the damage done by the flood of July 23 and 24, it was concluded that the reconstruction of the line for the eight miles between Bonneville and Schoening would not only be unwise but would actually cost more and require a longer time to complete than the construction of a new line supported on a higher level against the side of the valley. Between Schoening and Lysite the line was also in very bad condition, but it was decided to restore it on the old location.

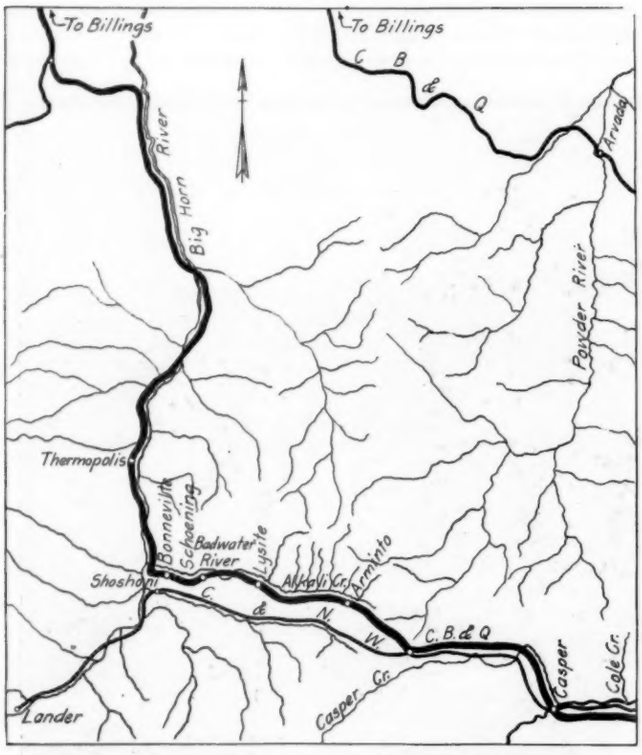
Following a decision to rebuild a portion of the line on a new location, the work of restoration was divided between the operating and engineering departments, the former conducting the rebuilding of the existing line and the latter the construction of the new location. Mr. Newton took personal charge of the new line construction, assisted by F. T. Darrow, assistant chief engineer of the lines west of the Missouri river, both of whom remained on the ground during practically the entire time from August 1 to November 1. E. Flynn, general manager of the lines west, and A. G. Smart, general superintendent of the Wyoming district, directed the work of the operating department forces.

Over 1,000 men were employed on this work. Bridge gangs from all portions of the system, including some from as far east as Aurora, Ill. (1,100 miles), were sent to the



Top. Heavy Deposits of Silt Raised the River Bottom Several Feet. Center and Bottom. Large Portions of the Yard at Bonneville Were Washed Away

work, together with pile drivers, derricks and other equipment, and were employed in building trestles across the washouts. Considerable delay was encountered in reaching the area of the greatest damage between Bonneville and Lysite because of local washouts at various points for a considerable distance on each side. Track forces were also organized to build "shoo-flys" around some of the washouts, as, for example, at Bonneville, where the west end of the yard had been carried away.

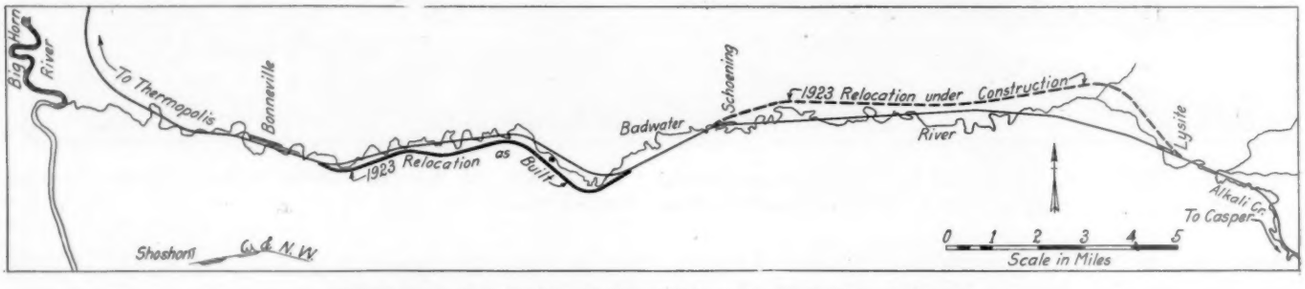


Map of the Burlington Lines in Central Wyoming

The eight-mile relocation involved heavy grading, averaging over 60,000 cu. yd. per mile, of which about 40 per cent was rock. A contract for this work was awarded to Sprague and Nicely of Casper, who started work on August 20. Owing to the necessity for the earliest possible completion of the new line, the grading was prosecuted on a very intensive scale involving the use of five steam shovels with the necessary dump cars and locomotives, 278 teams, eight tractors and seven grading machines. As a consequence progress was rapid and well in line with the progress made in repairing the damage on those portions of the old line that were to be retained, and it was estimated that operation could be resumed early in October. In the meantime, train operation was maintained from Billings to Bonneville and from Denver to Casper. Through passenger service between Denver and Billings was also effected by an arrangement with the Chicago & North Western whereby passengers were transferred to trains on the Casper-Lander line of that road, which parallels the Burlington between Casper and Bonneville, but occupies another drainage basin about six miles to the south which was not so seriously affected by the flood. Passengers were transferred from the North Western trains at Shoshoni across country in motor busses to Bonneville, where connection was made with Burlington trains to Billings.

Measurable progress had been made in the restoration of the line and the construction of the new eight-mile line between Bonneville and Schoening when the storms of September 27 and October 9 not only destroyed a large portion of the repair work, but so greatly increased the difficulty of restoration in the ten miles between Schoening and Lysite that it was decided to provide a new location for this portion of the line also. The new location for the entire distance between Bonneville and Lysite involves additional curvature as compared with the old line to the amount of 270 deg., but requires no departure from the ruling grade of 0.65 per cent eastbound (operated as a helper grade) and eliminates 8 of the 11 crossings of the Badwater river.

Indicating the Character of Damage Done at One End of the Bonneville Yard



Where the Burlington Suffered Most Severely from Floods

Through traffic on the Burlington has now been established by the use of the new location between Bonneville and Schoening and a temporary line following the general location of the original line between Schoening and Lysite. This line can be used through the winter months when there is no danger of floods, and it is anticipated that the new line between these two points will be completed before the spring floods which would undoubtedly cause washouts on the temporary line.

Final Hearings on I. C. C. Consolidation Plan

N. I. T. L. Asks Commission to Reserve Final Report—Controversy Over Central of New Jersey

WASHINGTON, D. C.

FUNDAMENTAL CRITICISMS of the Interstate Commerce Commission's tentative plan for consolidating the railroads of the United States into 19 systems were expressed by a committee representing the National Industrial Traffic League at the final hearings on the tentative plan held before Commissioner Hall and Examiner Healy November 16-21. Although the league does not assume to speak for shippers individually, the committee said its position was defined by resolutions adopted at meetings of the league at which several hundred members were present, and the commission was urged to recognize the impossibility of adopting a plan of the character prescribed by Congress at this time and under present conditions.

The controversy aroused by the suggestion of the New York Central that the Central of New Jersey and parts of the Philadelphia & Reading be allocated to it in the consolidation plan occupied much of the time of the final hearings, which are to be followed by arguments before the commission at Washington beginning on January 7. Over 12,000 pages of testimony have been taken during the hearing and nearly 700 exhibits have been filed.

Commission's Plan Condemned by National Industrial Traffic League

The National Industrial Traffic League is on record as favoring the repeal of paragraphs 4, 5, 6 and 8 of Section 5 of the act, which require preparation of a plan for consolidation of the railroads of the country into a limited number of systems, and the substitution therefor of a provision that consolidations which are found, after proper investigation to be in the public interest, may be allowed by the commission. The league is also opposed to compulsory consolidations.

The league did not offer any specific criticisms of any particular systems which the commission proposes but presented the general objection that, as a whole, the tentative plan is not in compliance with the directions given by Congress for the proposed plan and therefore should not be promulgated as such by the commission.

"There is no time limit within which this plan must be prepared and adopted," the committee said. "We have not yet emerged from the period of transition following the war and the federal control of railroads, and there is no real reason for haste in adopting a permanent plan of consolidation which will necessarily have a tremendous and revolutionary effect upon our national commerce. We may fairly ask whether it is possible to be sufficiently sure of facts in this period of transition to warrant adoption at this time of any particular plan of consolidation.

"The word 'limited' as ordinarily defined does not necessarily imply that there would be only a very small number of consolidated systems, nor does it require the creation of huge systems. It does not even seem to mean that the commission shall fix definitely the number of systems, or describe the systems with precision, but rather that the commission shall prescribe the limits within which consolidations may be made, without specifying that certain systems shall be established within the limits so fixed.

Tentative Plan Does Not Preserve Competition

"The league believes that the tentative plan will not preserve existing competition and maintain present routes and channels of trade, as required by the first condition found in paragraph 4 of Section 5. The league greatly doubts whether it would be possible to devise any plan involving the formation of mammoth systems of railroads substantially larger than the principal systems at present existing such as the New York Central, Pennsylvania, Southern Railway and Santa Fe and Southern Pacific, and at the same time preserve competition and maintain existing routes and channels of trade.

"The provision of law last quoted amounts to a mandate against the creation of a few consolidated systems and is a clear recognition of the fact that the whole structure of American commerce and transportation is built upon competition. Monopolies are abhorrent to American enterprise and are directly opposed to national principles. Competition of railroads has been and is now of inestimable value in developing our national wealth and commerce. While there has been, to a considerable extent, substitution of regulation for competition in rates, competition of railroads is still a controlling factor in most of the important rate structures in the United States. The commission's records abound with decisions in which it is pointed out that the carriers may and do maintain rate structures through stress of competition which the commission, as a regulating body, could not undertake to establish or maintain. Restriction of important railroad competition through consolidation would certainly have a very far-reaching effect upon the competitive rate adjustments of this country.

"The principal railroad systems are in direct competition in the service which they offer the public under their established rates. The stimulation of initiative on the part of individual railroad managements in competition is the prime factor in bringing about efficient service to the public. Moreover, the rivalry of competing lines is one of the chief factors in development of lines in new territories and the enlarging and increasing of railroad facilities. Each railroad, under present competitive conditions must develop traffic on its own line and must make rates which will permit of the largest possible movement in competition with similar traffic of other lines. Any discussion of the importance of competition seems unnecessary however since Congress has expressly provided that in the plan competition shall be preserved and existing routes and channels of trade maintained.

"With respect to preservation of competition, we submit that if all of the steam railroads of the country were to be consolidated into substantially 19 mammoth systems, as contemplated by the tentative report, it is inevitable that there would be greater centralization of industry and destruction of present channels of trade, which have been developed over a long period of years and at great expense to the numerous industries throughout the country.

Undue Advantage to Chicago

"The present tentative plan contemplates that practically all of the proposed consolidated systems will center on Chicago. The natural result will be to centralize industry at Chicago to the detriment of many other communities. For example, if the trans-continental systems which will radiate from Chicago can handle a large volume of traffic to or from Chicago instead of to or from St. Paul, Minneapolis, St. Louis, Omaha, Kansas City or other cities farther west, it will be to their decided advantage to do so, since they will thus obtain the long haul upon a larger percentage of their

traffic. They will naturally establish rates that will tend to that result.

"Under present competitive conditions, lines which reach Chicago only through connecting railroads have a direct incentive to build up the localities upon their own rails, and thus obtain the maximum revenue for the commerce handled to and from those points, rather than divide with their connections.

"The railroads of the United States are today divided into a score of large systems with 6,000, 8,000, 10,000 or 12,000 miles of line each, and a very large number of short terminal or feeder lines of strictly local character, with an intermediate class of railroads, rather limited in number, with from 200 or 300 to 2,000 or 3,000 miles of line, such as the Chicago Great Western and the Delaware, Lackawanna & Western railroads.

"The tentative report contemplates the formation of 19 systems, 10 of which will have a greater mileage than any system now operated under a single management, but at the same time the plan contemplates 4 systems of less than 4,000 miles each, one of which, Proposed System No. 9, is made up of a single existing railroad—the Norfolk & Western—with the addition only of the Toledo & Ohio Central—line of minor importance. The remaining 6 of the 19 proposed systems are of 7,000 to 12,000 miles each.

"If, under the directions given by Congress the commission may properly provide in its proposed plan for 3 or 4 systems of only 2,000 or 3,000 miles of track each and for 5 or 6 systems with less than 10,000 miles of track, then it would seem that there is no real necessity for providing a mammoth system with more than 20,000 miles of line such as proposed System No. 15, which will include the present Chicago, Milwaukee & St. Paul System and the present Great Northern System, of more than 11,000 and 8,000 miles respectively; nor would it seem necessary that the Missouri-Kansas-Texas be consolidated with the present St. Louis-San Francisco, each now having 3,000 or 4,000 miles of line, into a new system including a considerable number of shorter roads and having an aggregate mileage of 13,000 miles.

"We assume that the Norfolk & Western is continued in the tentative plan as an independent system, despite its comparatively short mileage, because of the impracticability of combining it with any other railroads without severely restricting present competition, and that the same is true of the proposed Chesapeake & Ohio System No. 8. On the other hand, the proposed plan, certainly will greatly restrict competition by combining the Great Northern with the Chicago, Milwaukee & St. Paul, competitive trans-continental lines, and each being a system of sufficient size for maximum efficiency in operation.

"Under the tentative plan with these large systems, it will be impossible to preserve competition as it exists today or to maintain existing routes and channels of trade and commerce. To comply with this requirement of Section 5, the important competing railroad systems as they exist today will have to be preserved without merger of such competitive systems. This does not mean, of course, that many of the feeder lines and less important railways cannot be joined advantageously with present existing systems to which they are or may be fairly complementary.

"The league desires, therefore, to be on record as condemning tentative plan as a whole on the ground that it is contrary to the public policy and contrary to the mandate of the law in that it restricts competition and destroys existing routes and channels of commerce, and that a new plan must be substituted therefor, which will confine consolidations to lines that are strictly supplemental or complementary.

Valuation Must Be Determined First

"It is manifest that the commission cannot possibly determine the cost of transportation as related to the values of the properties until it has made further progress with the valuation of those properties. We challenge the authority of the commission to adopt a plan of consolidations under the existing law until it has determined the valuation of the constituent properties which will enter into each system. We submit that the commission may properly report accordingly to Congress.

"The league believes it virtually impossible for the commission to devise a plan under which 'the several systems shall be so arranged that the cost of transportation as between competitive systems and as related to the valuation of the properties through which the service is rendered, shall be the same.' We believe there is no evidence in this record justifying the finding that the proposed plan would fulfill this requirement.

"The next instruction in the statute reads: 'so that these systems can employ uniform rates in the movement of competitive traffic and under efficient management earn substantially the same rate of return upon the value of their respective railway properties.' Here, again, value is an element that must be ascertained before any consolidation scheme can be adopted if the letter—and indeed the spirit—of the statute are obeyed.

"According to the best information obtainable, the proposed 19 systems described in the tentative report in all probability would not earn anything like a uniform rate of return. On this point we have some statistics to present. The secretary received recently from a source not official, but considered reliable, a compilation of statistics covering the 19 systems as proposed in the tentative plan. To determine the accuracy of the statement it was submitted to the statistician of the Bureau of Railway Economics, with the request that he check the figures against reports from official sources. He did so, and replied by calling attention only to two or three minor inaccuracies; answering that otherwise the statement was correct.

Probable Net Earnings

"It will be observed from the summary that for the year ended December 31, 1922, the lines comprising proposed System No. 4 earned in the aggregate 1.36 per cent of their book value, while proposed System No. 9 earned 5.21 per cent. The remaining 17 systems had rates of return between the minimum and maximum figures of 1.36 and 5.21 per cent.

"This statement of course, disregards entirely changes in traffic that might result from the formation of the proposed systems, and possible savings in operating expenses. It assumes that if these roads had been consolidated into 19 systems, the earnings and expenses would have been the same as the aggregate of the separate properties during the year in question.

"The league believes that there is very serious doubt whether consolidating the lines into such systems would result in any economies unless the service to the public were greatly impaired. Moreover, even if it were possible to comply with the statute and establish systems having for the time being a uniform rate of return, we submit that the experience of the past clearly demonstrates that such uniform rate of return would not long continue. A simple provision for efficient management incorporated into the interstate commerce act will not produce efficient management. It is all right to provide that the systems created by the commission shall under efficient management earn substantially the same rate of return upon their value, but such provision is not self-operative or self-executing. We may contrast the present efficient operation and prosperous condition of certain of our leading systems today with conditions on those same lines 10, 20, or 30 years ago. On the other hand, contrast the position today of some of the big systems which are weak financially with the strong position of those same roads a

decade ago. The league, therefore, submits that the commission cannot adopt the tentative plan as complying with this provision of the statute.

Final Report Should Be Reserved

"In conclusion, therefore, the league urges that the commission confine its report to an analysis and discussion of the testimony adduced in the hearings which are about to close, and announce some of the principles upon which consolidation may be made, without at this time making any definite plan. In other words, the commission is urged to recognize the impossibility of adopting a plan of the character prescribed by Congress at this time and under present conditions. Certainly Congress did not expect, when it enacted these paragraphs of Section 5 that the commission would promulgate a make-shift plan before it has all the information which is necessary to be considered under the directions of the statute and without regard to the inherent soundness of the plan. On the contrary, the league believes that Congress will expect the commission to bring to its attention all of the difficulties which the matter presents and thus give Congress and the country the benefit of the best judgment and expert advice of the commission based upon its careful investigation in the present proceeding, reserving its final report until it has the facts before it which are necessary to carry out the requirements of the statute."

Central of New Jersey Controversy

The Central of New Jersey controversy was precipitated by the suggestion by President A. H. Smith of the New York Central at the hearing last May that if the Philadelphia & Reading were to be allocated to the proposed Baltimore & Ohio System No. 3, the Central of New Jersey, together with the Catawissa branch of the Reading, making a line from Williamsport, Pa., to Jersey City, should be allocated to the New York Central in order that it might be connected up into a new trunk line to the west via its Clearfield route and Ashtabula, O., and thereby afford additional facilities for handling the growing traffic to New York. This suggestion was promptly opposed at the time by President Daniel Willard of the Baltimore & Ohio, who elaborated his objection to the plan at the hearing on November 17.

Grouping of the Central of New Jersey and parts of the Philadelphia & Reading with the New York Central system as proposed, Mr. Willard said, would give that system almost a monopoly of terminal properties in the New York City area, would do extreme violence to the spirit of the transportation act and would raise a serious question as to whether the Baltimore & Ohio could continue to operate its trains into the New York City region.

Maps were submitted by Mr. Willard to illustrate his point that the New York Central predominates with its terminals in the New York district, and how relatively insignificant the terminal properties of the Baltimore & Ohio are as compared with the terminal properties of other carriers, although the Baltimore & Ohio is the third largest railroad system in the country in point of gross earnings. Mr. Willard reiterated that allocation of the Jersey Central and parts of the Philadelphia & Reading to the New York Central would tend to make a strong system stronger and weaker systems weaker. He read a resolution adopted by his board of directors approving, with some exceptions, the commission's tentative system No. 3, which provides for the inclusion of the Central of New Jersey and Reading in the Baltimore & Ohio system. The New Haven also was included in this system, but Mr. Willard said the Baltimore & Ohio feels that this road should be made a part of a New England system.

Mr. Willard said that the Baltimore & Ohio's freight terminals on Staten Island are so far from Manhattan Island as to be wholly inadequate and that much of its New York business is now handled through Jersey Central terminal facilities for that reason. The Baltimore & Ohio has hoped for some time that it might be possible some day to transfer its freight terminals to Jersey City and so had not developed its Staten Island terminals to a greater extent. Also, the New York legislature has ordered all railroads in the New York district to electrify their terminals by January 1, 1926, which would involve an expenditure of from $12,000,000 to $15,000,000 to continue the terminal at Staten Island. Moreover, the Pennsylvania has served formal notice that the Baltimore & Ohio must vacate its passenger terminal in New York by September 1, 1925.

"Unless we could go back to Jersey City with our passenger trains under conditions more favorable than we had there before, and if we are to be deprived of the opportunity to transfer our freight facilities to that point, it would become a very serious question as to whether we would be justified in staying in New York or whether we should not stop at Philadelphia and give our business to connecting lines," Mr. Willard said. "I am not making that statement as a threat but as a plea. We hope nothing will happen to make it necessary for us to think of leaving the largest city in the United States, but unless it can be worked out in some way so that we can be put on a parity with other roads, it becomes a serious question whether we should try to compete at all as an initial carrier into New York."

The New Trunk Line Suggestion

Referring to Mr. Smith's suggestion that by use of the Jersey Central and parts of the Reading, the New York Central could open up a new through trunk line to the west, Mr. Willard said he doubted whether it would be necessary in the immediate future. Existing trunk lines to the west from New York are amply able to carry all the business they are likely to have for years to come, with some slight extensions. The difficulty is at the terminals. However, if necessary, such a line is now available, shorter and better than that proposed by Mr. Smith, without any new construction, Mr. Willard said. The route from New York to Williamsport, Pa., via the Jersey Central and Reading, Mr. Willard said, could be used by the Baltimore & Ohio as well as by the New York Central. The lines of the Pennsylvania and the Buffalo, Rochester & Pittsburgh could be used from Williamsport to Butler, Pa., where connection would be made with the Baltimore & Ohio for Chicago, making a line of 900 miles from New York to Chicago, with a summit 200 feet lower than that of the New York Central, as compared with a distance of 923 miles via the Clearfield route as proposed by Mr. Smith, and 979 miles via the New York Central main line.

"This line," Mr. Willard said, "is shorter than any line or combination of lines that I know of. It is already built and in good condition, but it is not being used as a through route, except when necessary to meet an emergency. It is not used by the Baltimore & Ohio except for local business because we naturally prefer to use our own rails beyond Butler. But we have always had in mind that the time might come when it should be developed and if the tentative plan of the commission for group No. 3 should become permanent, I think we should consider it to our interest to develop that line because of its superior physical qualities."

Mr. Willard added that the Pennsylvania was willing to put in rates and divisions to make such a route effective. He repeated what he had said at the previous hearing that the Baltimore & Ohio is not seeking to extend its properties, but has simply indicated its general acquiescence in the plan of Congress for grouping the roads into large systems with the underlying principle that they should all be approximately of equal strength. However, if the New York Central should be allowed to obtain trackage rights over the best

and most profitable parts of the Reading, and the Reading so deleted were to be put in system No. 3, the object for which it was put in that system in the tentative plan would not be fulfilled.

New York Port Authority Shows Interest

Julius Henry Cohen, counsel for the Port Authority of New York, questioned Mr. Willard as to the relation of the disposition of the Jersey Central to the Port Authority's plan for the development of terminal properties in New York. This plan, he said, presupposes that both the Baltimore & Ohio and the New York Central will stay in New York, and both have access to the Central of New Jersey. Mr. Willard said he saw no fairness or equity in taking one property and throwing its terminals open to all unless all the terminals were to be treated that way. He said the Baltimore & Ohio would not oppose such a plan if put in universally at New York. However, Mr. Willard said, whichever road gets the Central of New York should allow its use to the other and the Baltimore & Ohio would have no desire to restrict its use. Mr. Willard put in a statement to show that the Central of New Jersey interchange with the Baltimore & Ohio is larger than that with any other road.

Mr. Smith Explains Position

The position of the New York Central was further defined on November 19 by President A. H. Smith, who said that it had been misunderstood and criticised by some who apparently had not read his original statement on the subject. He said that he had not "started" the matter and that his suggestion was based on the assumption that the Baltimore & Ohio would have the Philadelphia & Reading and that it would be only fair, if the Baltimore & Ohio should have the line from Philadelphia and trackage rights to and terminals in Jersey City, that the New York Central should have the line from Williamsport to Jersey City and a share in the terminals. He would be willing to accord the Baltimore & Ohio a fair share of the terminals and an opportunity to compete for its share of business in New York, but he felt that to allocate the entire line east of Williamsport to a competitor would "cut it out from under" the New York Central after its 15 years of effort and expenditures to bring the Clearfield route to Williamsport to develop a new line. In the event of a consolidation of the Central of New Jersey and the Catawissa branch of the Reading with the New York Central, he said, the existing through routes and joint rates of the Central of New Jersey and the branches of the Reading would be retained and no attempt would be made to close any of the routes or to prejudice them by any discrimination in service. It has always been the policy of the New York Central, he said, to rely upon its service to obtain the long haul and not upon restrictions of routing or the abolition of competitive gateways. Also the New York Central would favor the establishment of reciprocal switching in connection with industries located on the Central of New Jersey within the port district of New York.

Regarding the new route between Chicago and New York suggested by Mr. Willard, using the B. R. & P. from Butler to Dubois, Pa., and the Pennsylvania from Dubois to Williamsport, Mr. Smith said that while "this selection of pieces of railroad" does produce a shorter line than the proposed New York Central route, the latter can easily be shortened and its grades revised to an extent that would leave little or no difference. Also while the route proposed by Mr. Willard would have a slightly larger percentage of double track, it would have a much less percentage of third and fourth tracks. Whereas the New York Central route has been an important traffic route for 15 years, Mr. Smith said, the other never has been a through route, and while the line proposed by the New York Central would be under a single ownership and management, that proposed by the Baltimore & Ohio "would not really be anything more than a through route for joint traffic" and "something less than an effective trunk line." As to a suggestion that both railroads should jointly operate from Williamsport into New York, Mr. Smith said it would not be practicable for a railroad of this character to be satisfactorily operated under the joint management of two competitive lines.

Wherever the management of a consolidated Baltimore & Ohio, Philadelphia & Reading and Central of New Jersey system should be located, Mr. Smith said, it would always, under the existing system of port differentials, be to the interest of that management to handle as much as possible of its export and import traffic through Baltimore rather than through New York.

The fundamental basis of his proposal, Mr. Smith said, is that the eastern part of the New York Central lines should be balanced with the western part. The proposed improved line by way of Newberry Junction would provide capacity for this traffic on the eastern part of the system more nearly in keeping with the gathering and distributing capacity of the western part of the system. Mr. Smith emphasized that in his original statement he had said that trackage for the Baltimore & Ohio between Bound Brook and Jersey City would be preserved, with suitable participation by the Baltimore & Ohio in the Jersey City terminal facilities for both freight and passenger service.

"The Central of New Jersey," he said, "naturally belongs to the metropolitan district of which New York is the center. We have anticipated this for many years. We bought into the Central of New Jersey many years ago, then we built our own line from the west over from Clearfield to connect with it. We think it should not be detached and put into the hands of a competing line, particularly one which is to be awarded such an important facility as the Philadelphia & Reading. I recognize that the Baltimore & Ohio should go to New York, but if you give it the Philadelphia & Reading and also the line from Williamsport down I don't think we would have much show."

Mr. Smith was questioned at length as to the relation of his plan to the ideas of the Port of New York authority for New York terminal development by Mr. Cohen, who said it had not as yet determined its position as to the Central of New Jersey. He said, however, it would welcome a suggestion from Mr. Smith and Mr. Willard of a plan by which the city could have the benefit of both lines regardless of which holds title to the property of the Central of New Jersey.

Representatives of Commercial Bodies Heard

Representatives of various commercial organizations submitted testimony for and against the proposal made by the New York Central and also the tentative plan of the commission. Charles J. Austin, of the traffic department of the New York Produce Exchange, read resolutions adopted by the Exchange, endorsing the proposal of the New York Central. He said this plan would create a new through line of great potential value to New York and the west and that it hurt no shipping interest.

W. H. Reed, counsel for various Philadelphia trade bodies, said the Central of New Jersey and the Reading should be consolidated and treated as an independent terminal line, free and open to all lines serving Philadelphia and New York. He said if the New York Central should get the Jersey Central and the Catawissa branch of the Reading, it would do great harm to Philadelphia because it would divert traffic from Philadelphia to New York, whereas if the lines were left independent, Philadelphia and New York would be left in the same relative positions they are in today. Edgar Ziegler, chairman of the board of directors of

the United Business Men's Association of Philadelphia, expressed similar views.

R. B. Brubaker, of Clearfield, Pa., appeared for the Lakes-To-The-Sea-Trunk-Line Railroad Association, which was organized by a number of towns along the Clearfield route. This association strongly favors the New York Central plan. Mr. Brubaker said the plan, if put into effect, would put Clearfield and other towns in the northwestern part of Pennsylvania "on the map."

E. J. Poole, chairman of a committee appointed by the mayor of Reading, Pa., and vice-president of the Pennsylvania State Chamber of Commerce, declared that any absorption or dissolution of the Reading and Central of New Jersey would be disastrous and that the lines should not be grouped with the Baltimore & Ohio or the New York Central but kept as independent systems.

M. R. Sherrerd, a civil engineer appearing for the City of Newark, submitted a report favoring the New York Central plan, because, he said, it would make it possible to avoid congestion of sea-destined traffic by diverting it from Manhattan through the development of the Jersey meadows.

Other Roads

W. T. Kemper, receiver of the Kansas City, Mexico & Orient; A. L. Burford, attorney for the Louisiana & Arkansas; C. E. Glass, of the Detroit & Mackinac, and Thomas White, secretary and general manager of the Boyne City, Gaylord & Alpena, filed basic statistics desired by the commission. The Midland Valley, which is assigned to system No. 17, said it is immaterial in which group it is placed but asked that the commission refrain from assigning it to any system, as to do so would limit its opportunity to sell its property. S. M. Russell, receiver of the Toledo, Peoria & Western, filed the basic statistics and said he had no suggestions to offer as to the disposition of that road in the plan. W. P. Robinson, president of the Moffat Tunnel Commission, supplemented his previous testimony by describing the progress made on the construction of the terminal through James Peak. S. T. Bledsoe, general counsel of the Atchison, Topeka & Santa Fe, said that as the record now stands, the Santa Fe has no additional testimony to offer.

Ralph Budd, president of the Great Northern, filed some statements to supplement his testimony at the earlier hearing, showing the percentage of return for the first eight months of 1923 for the proposed system of the Great Northern, Northern Pacific, Chicago, Burlington & Quincy and Colorado & Southern, as compared with other proposed systems, and F. W. Charske, comptroller of the Union Pacific, submitted some additional statistics.

Walter Splawn, of the Texas Railroad Commission, said that that commission is in no way committed to the general idea of consolidation, as explained at the Fort Worth hearing, but he submitted a plan for combining the roads into 10 systems as more desirable than the tentative plan of the commission.

C. R. Capps, vice-president of the Seaboard Air Line, submitted some supplemental testimony and asked that the record in the case in which the Seaboard is opposing a lease of the Carolina, Clinchfield & Ohio to the Louisville & Nashville and the Atlantic Coast Line be considered in connection with the consolidation proceeding.

E. D. Hilleary, vice-president of the Philadelphia & Reading, and J. E. Crawford, assistant general manager of the Norfolk & Western, also gave supplemental testimony regarding the details of their interchange of traffic with connecting roads. He was cross-examined by W. S. Bronson of the Chesapeake & Ohio to show that the Norfolk & Western could not handle coal from mines on the Virginian toward the lakes as economically as the Chesapeake & Ohio could and that the latter, by a small amount of construction, could give the Virginian a considerable tonnage of coal for tidewater to balance Virginian tonnage toward the lakes.

A supplementary statement by L. F. Loree, president of the Delaware & Hudson, was submitted, amplifying the protest he had made at the hearing last May against the suggestion in the tentative plan of the commission to make the Boston & Maine part of an enlarged New York Central system. This suggestion, he said, has created great apprehension on the part of the directors, officers and owners of the Delaware & Hudson, for the reason that, if it should be carried into execution, their railway would inevitably be deprived of a large share of the traffic now interchanged with the Boston & Maine through the Mechanicville gateway and would no longer be able to compete upon substantially even terms for traffic interchanged between New England and the territory west of the Hudson. Mr. Loree said that no arguments had been made in support of this proposal in the tentative plan, which Professor Ripley had strongly deprecated.

P. H. W. Ross, rate consultant of the city of Newark, and other representatives of that city testified in support of the plan suggested by the New York Central as of greater benefit to Newark than the plan of allocating the roads to the Baltimore & Ohio. J. H. Zerbey, a newspaper publisher of Pottsville, Pa., protested against any dismemberment of the Reading system; he said that if there must be any dismemberment or absorption he would prefer to see the Reading placed with the Baltimore & Ohio.

New England Roads

Half a day was taken up with presentation of additional facts on the New England situation. E. W. Lawrence, general attorney for the Rutland, urged that his company be placed in the proposed New York Central system. H. W. Vaughan, president of the Rutland Chamber of Commerce, said that that organization would prefer to have the railroad left alone, but if assigned to any system it should go to the New York Central and not placed in a single New England system. Benjamin Campbell, vice-president in charge of traffic, and E. J. Buckland, vice-president and general counsel of the New York, New Haven & Hartford, told the commission that the management of the New Haven desires to be left alone to work out its own salvation, which it confidently believes it can do, but if there must be a consolidation of railroads, Mr. Buckland said, the New Haven favors a consolidation of all roads in New England except the Canadian lines. Mr. Campbell also explained the effect of various proposed groupings on the rate situation. Mr. Buckland filed a report made to the directors of the New Haven by Winthrop M. Daniels, former member of the Interstate Commerce Commission, and now professor of transportation at Yale University; William J. Cunningham, Professor of Transportation at Harvard, and W. C. Kendall of the Car Service Division of the American Railway Association, regarding certain points relating to the operation of the road contained in the report of the joint New England railroad committee. In general Professors Daniels and Cunningham found that the adverse criticism of the Storrow report, directed primarily against car operation of the New Haven, had "failed to give proper weight to operating handicaps; that the average car miles per car day on the New Haven reflected essentially not inefficiency of operation, but the sum-total of conditions, physical, traffic and transportation, under which the road necessarily operates; that the alleged excessive cost of slow movement of freight cars, the alleged unnecessary delays in classification yards, the imputed unnecessary loss of time in placing cars at destination, the implied excessive payments of per diem by the New Haven, the adversely criticised low net ton miles per car day—all hark back to and are necessitated by the sum total of conditions under which the New Haven inevitably works."

It also found that the adverse criticism of the New Haven

wherein these factors are compared to the disadvantage of the New Haven as contrasted with other New England carriers "fails adequately to appraise the totality of the relative conditions under which the carriers compared respectively operate; and that due allowance for the difference in relative conditions practically explains the above comparisons which only seemingly, but not really reflect unfavorably upon the New Haven." Mr. Kendall submitted a supplemental statement regarding the embargo policy of the New Haven, which also stated that he agreed generally with the statements made in the report of Professors Cunningham and Daniels respecting the criticisms contained in the Storrow report.

George F. West, president of the Maine State Chamber of Commerce, opposed the Storrow plan for a single New England system, on the ground that it would eliminate competition, and favored the McDonald plan, under which the Maine lines would be grouped with the New York Central. John E. Oldham, of Boston, filed a statement supplemental to his testimony in the New England hearing.

Other Testimony

J. L. Nisbet, general agent of the Georgia, Florida & Alabama, appeared on behalf of Mrs. Cora B. Williams, president and principal owner of the Georgia, Florida & Alabama, to urge that the road be grouped with the Atlantic Coast Line system.

Newman Erb, president of the Ann Arbor, objected to the commission's tentative grouping of that road with the Pere Marquette system, saying that the expansion of the Ann Arbor and other Michigan roads lies in a different direction than that contemplated by the tentative plan. He suggested that the Ann Arbor be grouped with the Wheeling & Lake Erie and Western Maryland, forming a connection between the Lakes and tidewater, intersecting all the trunk lines and making available to them a route to the Northwest by lake car ferries, avoiding the congestion and delay incident to the haul through Chicago. He said this line should be maintained independent for the use of all trunk lines and to compete with the Pere Marquette and the Grand Trunk Western. However, he said, he did not believe that the United States government will continue much longer to permit a railroad owned by the Canadian government to operate within the borders of the United States in competition with the United States lines.

Ben B. Cain, vice-president of the American Short Line Railroad Association, presented a list of short line railroads which had suggested the systems to which they thought they should be allocated, and of some which protested against any allocation at all. For the association he submitted a general statement of principles which he thought should govern the commission in dealing with short lines, stating that the order of the commission should either authorize consolidation with any one of the systems with which short line railroads may connect, or else the commission should allocate such roads preferably to a particular system, but in the alternative allow such roads to negotiate with another system, the order of the commission being kept open for such change or modification as may be needful or desirable. In most instances he said, the public interest will not be so substantially affected as that they may not be consolidated with any system with which they connect. Where the situation is otherwise, he presumed that the commission will definitely allocate such road. However, even in such a case, he thought the door ought not to be entirely closed to negotiation with other systems.

SHOP FOREMEN of the Michigan division of the Northwest Region of the Pennsylvania have formed a club, the purpose of which is to make the men better acquainted with one another and to help solve shop problems.

Railroads Oppose Depreciation Rules

WASHINGTON, D. C.

RULES for the setting up of depreciation accounts and reserves as proposed in a tentative report of the depreciation section of the Bureau of Accounts of the Interstate Commerce Commission were opposed by railroad officers at a hearing before Division 4 of the commission at Washington on November 19, 20 and 21. The President's Conference Committee had adopted a resolution on August 23 reaffirming its former several resolutions on depreciation and expressing the judgment of the committee that "the charging of depreciation on roadway and structural improvements should not be made obligatory, but be left optional under the accounting regulations of the Interstate Commerce Commission, or if the commission feels obliged by the transportation act of 1920 to specify the particular classes of property upon which depreciation shall be charged, then that it limit such classes to structures of such magnitude and cost that the charging of the entire cost thereof to operating expenses at the time of retirement would render the operating expense accounts for that year disproportionate as compared with other years." In an earlier resolution the executives had expressed the opinion that depreciation charges should be confined to equipment. Testimony was given by L. F. Loree, president of the Delaware & Hudson; W. H. Finley, president of the Chicago & Northwestern; Howard Elliott, chairman of the board of the Northern Pacific; and W. L. Mapother, president of the Louisville & Nashville to the general effect that it is not necessary to set up depreciation reserves for the purpose of equalizing retirements; that any such plan as the commission has tentatively proposed would result in such large reserves as to be uneconomical at this time; but, if the commission thinks the act is mandatory, which was not admitted, depreciation accounts should be confined to the larger and more costly structures. The executives argued that there is no appreciable depreciation in the fixed property in an operated railroad as a whole so long as it is properly maintained and kept in condition for efficient operation, and that where replacements of the individual units are timely and properly made there does not exist any ascertainable loss of service life in the composite property.

Unnecessary for Large Systems

"As I understand it," said Mr. Mapother, "the method proposed by the Depreciation Section contemplates the accrual of depreciation only with respect to the portion of the fixed property that may be designated 'Structural Accounts,' excluding from such treatment the large roadway accounts for grading, ties, rails, ballast, other track materials, track laying and surfacing, etc. The primary purpose of such depreciation accounting, as I understand it, is to stabilize annual maintenance and renewals charges for such structures. In my judgment, such accounting with respect to structures is useless when applied to properties of large railway systems. The renewals and retirements of structures as and when the necessity therefor arises, are not of sufficient amount to cause a serious distortion of operating expenses in any year. The larger carriers own and maintain such a large number of structures of various kinds and types that the charges to operating expenses for the entire group of structural accounts are not seriously affected by the retirement of even the most important individual structures. Moreover, provision for the spreading of such charges over an appropriate period of years is made in the commission's form of General Balance Sheet Account No. 726—'Property Abandoned, Chargeable to Operating Expenses.'

"As an illustration that the necessary charges to operating

expenses for retirements of fixed physical property subject to depreciation accruals under the plan of the Depreciation Section are relatively unimportant, the experience of the Louisville & Nashville for the five and one-half year period ending December 31, 1922, indicated that the original cost of property retired, excluding tracks, amounted to only .44 per cent of total operating expenses. Similarly, the average annual retirements for this period amounted to only about one-half of one per cent of the book value of the property. It is quite possible that losses from fire or other casualties are likely to cause more serious variations in operating expenses than would result from retirements from any other cause.

"As a practical matter, there is the perfectly obvious difficulty of determining correct, or even approximately accurate rates for such theoretical depreciation. Structures, if kept in repair, by an intelligent program of current renewals of component parts, do not depreciate, but may be maintained indefinitely. Although structures are sometimes replaced on account of obsolescence, inadequacy, or uselessness the cause of such retirement is generally independent of, and absolutely uninfluenced by the type of construction. I have seen modern structures of the best and most permanent type abandoned after a few years of service, and on the contrary have knowledge of hundreds of timber structures of great age, some of them more than fifty years old, which are satisfactorily serving the purpose of their design, and may never be retired on account of any physical defect remedial by repairs, though every stick of timber has probably been renewed at least once. No one can forecast, with even a semblance of certainty, the prospective life of a bridge, station, or other structure, irrespective of the type of construction. Whether built of timber, steel, or stone, no one knows whether it is going to last ten, fifty or one hundred years.

"Hardly Better Than a Guess"

"It is inescapable, therefore, that the very basis, i.e., a hypothetical service life, upon which assessments for depreciation on structures are predicated must necessarily be founded on an estimate that may be hardly better than a sheer guess. In fact, as the fundamental prerequisite to the assessment of accurate depreciation is the definitely known service life of a structure; and as such service life is impossible of ascertainment before the structure has ceased to serve, it inevitably follows that accurate depreciation cannot possibly be anticipated. Because of this inherent defect, therefore, which multiplies and magnifies in proportion to the indefiniteness of the service life, I can see no practical benefit in its application. To me it seems to be largely a system of theoretical accounting devoid of any tangible value; and its application seems merely an elusive symposium of meaningless calculations.

"If the amount of these accrual charges is arbitrarily prescribed it may be too high or too low. If too high the burden of the operating expenses by the unnecessary charges might seriously affect the financial or fiscal policy of the carrier in the matter of meeting its fixed charges and dividends and in other respects. If the amount prescribed is too low the result will be most disastrous to the carrier in the denial to it of its right to earn its true operating expenses.

"From a strictly financial standpoint, I can see no particular benefit inuring to the carriers by making charges to operating expenses on the so-called depreciation plan, if there is no material difference in the amount of the annual accrued charges and charges which are now made annually as retirements occur. On the other hand, if such accrued charges should materially exceed the annual retirement charges, it would mean nothing to the carriers to charge these estimated amounts to operating expenses, unless they were permitted to actually earn the amounts. The creation of a book reserve with no money behind it means absolutely nothing of benefit to the carrier.

"It is my conclusion that the accrual of depreciation charges for structures will tend to confuse and disturb rather than stabilize the operating accounts; that the principle as applied to railway structures is unsound, both in theory and proposed practice; that it would cost the carriers a substantial sum to prepare a valueless record, and that it serves no real purpose in accounting for maintenance of the great variety and number of structures on a large railway system.

"Nevertheless, if it is the sense of this commission that so-called depreciation reserves should be created for fixed physical property, it is my belief that the existing optional provisions of the Commission's accounting rules should be continued in effect, thereby permitting the executives of the individual carriers to exercise their discretion as to the desirability of or necessity for such accruals, depending upon the financial condition of the carrier and other exigencies of the situation."

Other Testimony

More detailed testimony was given by G. W. Hand, assistant to president, Chicago & Northwestern; G. S. Churchill, vice-president, Norfolk & Western; A. D. McDonald, vice-president, Southern Pacific; M. L. Byers, chairman of the valuation committee of the Seaboard Air Line, and G. H. Parker, commerce counsel, American Short Line Railroad Association.

Mr. McDonald's testimony included an account of the practice of the Southern Pacific, which maintains depreciation reserves for equipment and large structures such as the office building at San Francisco. He said that he would not advocate depreciation reserves for lesser structures or other fixed property and that if they were set up for such structures as snowsheds or trestles there would never be a charge to the reserve because such structures are never retired.

Commissioner Eastman asked if it would not be necessary for the commission to prescribe some standard for maintenance and depreciation in administering section 15-a of the act, for the purpose of determining whether the roads were making a fair return or the amount of their "excess earnings." Mr. McDonald said that would be entirely impracticable because of the varying circumstances of individual roads and because it is so largely a matter of judgment. It would be necessary for the commission, he said, to accept the judgment of the railroad officers and to study the accounts for instances of manifest neglect of maintenance or extraordinary charges to maintenance. Then followed a discussion of the honesty of railroad officers during which Commissioner Meyer asked if the commission should not investigate the case of a road that in order to reduce its net income for taxation purposes had set up a reserve representing an amount to be "recaptured" by the government, but in making its returns to the commission had reported no "excess earnings."

George H. Parker urged the necessity for setting up a reserve to represent the exhaustion of the service life of a property such as a short line built to handle a particular character of traffic which may become exhausted. He said that he did not believe that accountability by units is necessary to a system of depreciation and that inaccuracies affecting individual roads would be less injurious than entire omission. He also suggested that it might be well for the commission to establish a bureau to study the relation between the amounts expended for maintenance and depreciation, saying that such a bureau would find a larger field in checking up on the honesty, efficiency, economy and the reasonableness of expenditures for maintenance as contemplated by the transportation act.

Shippers Discuss Many Transportation Topics

National Industrial Traffic League Held Annual Meeting at Chicago on November 14 and 15

RAILWAY CONSOLIDATION, the merchant marine, car pooling and regional advisory boards were among the more important subjects considered at the annual meeting of the National Industrial Traffic League which was held at the Hotel Sherman, Chicago, on November 14 and 15. Approximately 500 persons were present at this meeting which was presided over by Charles Rippin, traffic commissioner of the Merchants Exchange, St. Louis, Mo., and president of the League, with J. H. Beek, executive secretary of the League at Chicago, as secretary. Reports which were presented showed that the membership of the League now includes 935 representatives of shippers and traffic organizations. A banquet was given on the evening of November 14 at which Charles Donnelly, president of the Northern Pacific, and H. F. Atwood were the principal speakers. The meeting was devoted to the consideration of resolutions and reports which are abstracted below and which were adopted by the League.

Charles Donnelly Condemns Canal Competition

Charles Donnelly, president of the Northern Pacific, spoke at the annual dinner on "Panama Canal Competition, a Condition, Not a Theory." He stated that manufacturers and other shippers throughout the middle western region are in danger of being destroyed financially if the Interstate Commerce Commission does not allow the railroads to arrange their tariffs in such manner as to enable them to compete with shipping through the Panama canal. He supported his statements by figures showing that in three years the traffic passing through the canal has quadrupled in volume. He said in part:

"Under the rulings of the Interstate Commerce Commission the railways running westward from Chicago and other points in the middle west are practically prohibited from making rates low enough to compete with those of the steamship lines from New York and other Atlantic seaboard points to the Pacific Coast, because the commission will not permit the railways to make lower rates from the middle west to the Pacific Coast than they make to Spokane, Salt Lake City, and other intermediate points; and to reduce their rates both to the Pacific Coast and to the intermediate points would reduce their total earnings unnecessarily.

"It is not the rail carriers alone that are concerned in the question whether they are to be permitted to compete with the carriers operating through the Panama canal for the movement of this inter-coastal traffic. The market centers of the middle west are all vitally concerned in it. Under the policy which prevailed until war conditions and the withdrawal of the ships from the intercoastal service made its further prevalence temporarily unnecessary, the interior was free to compete on equal terms with the Atlantic seaboard for the trade of the Pacific Coast, and undoubtedly it enjoyed a large share of this traffic. But if the rate adjustment is to be such as to confine the movement of this traffic to the carriers touching only the seaports and not reaching the interior—that is to say, if it is to be confined to the water lines—it is obvious that commodities destined to the Pacific Coast will be purchased in markets on or near the Atlantic seaboard, and the markets of the interior will be deprived of their share of this traffic, not because they are not ready and eager to compete for it, but because of the refusal to allow the only carrying agencies available to them to participate in its movement.

"To find a market western products must come east. If the cars which carry them cannot find a westbound load they must be hauled back empty, and the cost of the empty haul should be covered in the eastbound rate. Therefore, western shippers—and that means western producers—are directly interested in anything which will reduce the westbound empty car haul.

"The western railways have never been able to balance their through tonnage. The preponderance has always been eastbound. This is especially true of the transcontinental railroads, and the condition has been aggravated by their necessary withdrawal from competition with ships operating through the Panama canal.

"The location of forests, fields and orchards determines the origin of eastbound shipments from the Pacific Coast states. Most of them come from points more or less removed from the seaboard, and for this reason, and because many of the Pacific Coast products are of a perishable character, the eastbound shippers are largely dependent upon railroad service, while the westbound traffic, consisting largely of manufactured goods, goes mostly to the Pacific Coast cities which have a large consuming population, and because most of these things can be produced in the Atlantic seaboard states, and because they can as well be shipped by vessel, the business is more exposed to ocean competition.

"Before there was any interstate commerce laws, and for 30 years after its enactment, the railroads were permitted to make the necessary lower rates on these shipments to Pacific Coast terminals, and such business contributed largely to the revenues of the railroads, thus lightening the burden which otherwise would have been placed upon other traffic. In the war period the ships were withdrawn, and these exceptional rates to Pacific Coast terminals were cancelled, and have never been restored, nor have the railroads been since permitted to make any rates to Pacific Coast terminals which are lower than the rates to intermediate points.

"It cannot be said that the law prevents the making of such rates. The Interstate Commerce Act does prohibit the making of a lower rate to the further point, but the Interstate Commerce Commission, in its own discretion, may permit the making of lower rates under certain conditions, and these conditions are now recognized in connection with the making of export rates. For example, steel is shipped from Chicago to the Orient via Seattle in competition with steel shipped via the Suez or via the Panama canal and originating at Pittsburgh, or points nearer the Atlantic seaboard. We find that the Chicago steel mills cannot afford to pay more than 40 cents per hundred pounds for the rail haul to Seattle. This rate, in connection with the trans-Pacific steamship rate, equalizes the cost of shipping from Pittsburgh via Baltimore to the Orient. We are permitted to make this 40-cent rate without reference to other rates, and our service is not worth any more to those who pay for it.

"If these conditions were not thus recognized it would be impossible for the steel mills in the Chicago district to sell their product in the Orient, and the failure similarly to recognize ocean competition at Pacific Coast points and permit the railroads to meet it is making it impossible for the western mills to participate in that business.

"It is sometimes said that the practical exclusion of the rail carriers from the inter-coastal trade is justified by the language of the Transportation Act, in which it is declared to be the policy of Congress 'to promote, encourage and de-

velop water transportation service and facilities in connection with the commerce of the United States'; but this is only a part, and not the most important part, of the declaration. It is further declared to be the policy of Congress 'to foster and preserve in full vigor both rail and water transportation'; and the rail transportation afforded by the transcontinental lines cannot be fostered or preserved if, as the result of a short-sighted policy, those lines are denied the right to compete freely for any traffic which they may move with profit to themselves and without injury to the communities served by them."

Mr. Donnelly stated that during February, 1920, the traffic moving from coast to coast through the Panama canal amounted to 28,000 tons. This increased to 67,000 tons in February, 1921; to 95,000 tons in 1922, and to 238,000 tons in 1923. Westbound traffic totaled 698,000 tons for the first nine months of 1921; 1,288,000 tons in 1922 and 2,608,000 tons in 1923. Eastbound traffic for the same period aggregated 649,000 tons in 1921; 1,274,000 tons in 1922 and 5,460,000 tons in 1923. The latter consisted mostly of crude oil. Intercoastal traffic constituted 26 per cent of the total tonnage passing through the canal in 1921, 52 per cent in 1922 and 61 per cent excluding crude oil shipments or 73 per cent including crude oil shipments in 1923.

Classification Committee Obtains Co-operation of Consolidated Classification Committee

The Classification committee, of which W. O. Wright, transportation manager of the Associated Industries of Massachusetts, is chairman, reported that the committee has continued to hold regular stated meetings prior to the quarterly hearings of the Consolidated Classification committee by means of which it has established close co-operation with the consolidated committee which has resulted in clarifying proposed rules and conditions before they are put into effect. The committee has devoted a great deal of time to the consideration of dunnage allowance during the past year. The subject has been brought before the membership in the form of a questionnaire and a variety of views have been discussed. Conferences have been held with the members of the Consolidated Classification committee who have strenuously opposed the proposition with the result that it became evident that no satisfactory results could be obtained without resorting to a complaint to the Interstate Commerce Commission. The committee believes that this is a matter to be handled by individual industries and not by the League as a matter of general or national character and recommended that it be relieved of further consideration of the subject.

Committee on Diversion and Reconsignment Reported Progress

The committee on Diversion and Reconsignment, of which H. B. Rhodehouse, traffic manager of the Youngstown Chamber of Commerce, is chairman, reported that on July 19, 1923, a joint conference was held at Chicago, with the carriers' national diversion and reconsignment committee and a representative of the Interstate Commerce Commission. Since that conference R. V. Pitt, representing the commission, has requested certain additional information which was furnished him recently and it is expected that he will give his decision with respect to the disputed rates at an early date. The national diversion and reconsignment committee advised that the various changes in diversion and reconsignment rules negotiated by the committee and which have recently been considered and approved by the League will be published as soon as the commission gives its decision on the disputed rules so that all of the changes and additions will be made effective simultaneously.

The committee on Express and Parcel Post, of which H. M. Freer, traffic manager of the Fleischmann Company, is chairman, reported that the general express investigation by the Interstate Commerce Commission, I. C. C. Docket 13930, was given consideration by members of the Express committee. After consultation with W. H. Chandler, manager of the transportation bureau of the Boston Chamber of Commerce, who appeared for the League at the hearing held at Washington on April 19, it was decided that the commission must consider all facts in the case. As the supplementary petition set forth additional facts which the commission must consider in order to arrive at a thorough conclusion it was agreed that there was nothing further for the League to do in the matter. At the time of filing this report no decision had been rendered by the commission.

The committee reported that the League cannot be represented officially at hearings to be held at Ottawa, Canada, on October 4, on a petition filed by the Express Traffic Association of Canada with the Board of Railway Commissioners for Canada, asking for such adjustment of rates as will permit the express companies to earn a fair return for their service which the Express Traffic Association claims cannot be done on the present level of rates. The American Railway Express Company has given consideration to the inspection of concealed loss and damage and believes there should be some time limit within which consignees must call for the inspection of concealed loss to damaged shipments preliminary to recovery for such loss. The company believes that a 15-day limit is fair to both consignee and carrier and members of the express committee agree with this. The American Railway Association F. C. D. 162 now covers a 50-day provision on freight shipments. The committee has asked the American Railway Express Company to formulate a tentative rule covering inspection limits and to present it to the committee in a formal way so that it can be given full consideration. A minority report objected to this limit on the ground that a reasonable limitation under certain conditions may be entirely unreasonable under other conditions. This is borne out by the fact that the concealed loss and damage claims form of the freight carriers provides a 15-day limit within which inspection of damages shall be made but the carriers have found it impractical to enforce it.

The Express committee reported that the matter of the terms and conditions of uniform express receipts and the value shown on receipts, which was brought to the attention of the committee in connection with a copy of a letter to the Interstate Commerce Commission asking for the interpretation of that part of the terms and conditions of the contract reading "unless a greater value is declared and stated herein the shipper agrees that the value of the shipment is as last above set out and that the liability of the company shall in no event exceed such value" was taken up with the American Railway Express Company which claims that the express company's liability is based on destination value and this value is made up in part of transportation charges and, therefore, the shipper in making his declaration of value should add to his invoice the price at the origin and the cost of transporting the shipment to its destination. The matter is still pending. The minority report stated that the liability of the express company is determined by law and no arrangements which the League can make with the carriers can alter the obligations imposed on the carrier and shippers by the law, and asked that the subject be stricken from the docket.

Freight Claims Committee Makes Progress Report

The Freight Claims committee of which George A. Blair, general traffic manager of Wilson & Co., is chairman, reported that the committee had investigated the action of certain freight claim officers who reject claims such as those for concealed loss and damage, because of the failure of consignees to inspect and report loss and damage within 15 days after receipt. The general committee of the Freight Claim division of the American Railway Association decided that

a claim should not be declined solely for this reason, but that investigation should be made to determine whether or not any irregularity in handling the shipment by the carriers accounted for the loss or damage claimed and that when a claim is disallowed care should be taken to state specifically that thorough investigation has failed to develop any negligence or improper handling of the shipment by the carrier or carriers.

The question of concealed loss and damage on important shipments has been taken up with the Freight Claim division of the American Railway Association. There has always been more or less complaint regarding the attitude of eastern trunk lines in respect to claims of this nature and at a meeting of the Eastern Claims Conference on July 9 a resolution was adopted which will result in a more satisfactory handling of claims of this nature. The question of the refund of overcharges by the carriers without presentation of the claims has been a subject of more or less correspondence with R. E. Woodson, secretary of the Railway Accounting Officers Association and Lewis Pilcher, secretary of the Freight Claim division of the American Railway Association. Many instances were cited where railroads were not refunding such overcharges but there was nothing to report regarding uniform action on the part of the railroads in this respect except that the committee has the assurance of Messrs. Woodson and Pilcher that the matter is being brought vigorously to the attention of their members.

Legislative Committee Opposes Consolidation

The Legislative committee, of which R. C. Fulbright, president of the Houston Compress Company, is chairman, recommended that the League proceed slowly in the formulation of its policy regarding contemplated legislation affecting the railroads. The League has always felt that co-operation between the railroads and shippers constituted the only solution of the most important aspects to the problem. The events of the past year have demonstrated that no radical or sweeping regulatory legislation is necessary to enable the railroads to function efficiently. The League is opposed to bills which may be introduced at the coming session of Congress which contemplate making changes in the Interstate Commerce Act, especially to take away from the Interstate Commerce Commission the authority to require that intra-state freight rates should be raised for the purpose of removing discrimination against shippers engaged in interstate commerce. The committee believes that to oppose any change in the Transportation Act would place the League in the position of blocking progress while on the other hand it believes that the League should take no action which will imperil the good features of the existing law in an effort to bring about revision where it is considered proper.

The committee recommended that the League adopt a general policy of opposition to measures which are clearly contrary to the principles heretofore adopted. It recommended further that the League oppose the placing of limitation upon the time within which carriers may consolidate voluntarily subject to the approval of the commission, and also recommended that the League reiterate its opposition to all measures looking to the compulsory consolidation of the railroads. The committee requested the League to consider the suggestion that the arbitration law of the Railroad Labor Board be supplemented by provisions giving the president or some other governmental agency the power to appoint a special committee to investigate the issues in any case where arbitration has not achieved the desired result and to make public its findings as to the contentions of the opposing parties as well as its recommendation with respect thereto.

Passenger Traffic Committee

The Passenger Traffic committee, of which L. C. Parshall, traffic manager of the Amendt Milling Company, is chairman, reviewed the Pullman surcharge hearings and stated that the executive committee of the League has passed a resolution to the effect that, while the League is not now advocating any general reduction in the carriers' revenues, it believes that the method of collecting the Pullman surcharge may properly be changed. The committee made no recommendations.

A special committee on Embargo Rules and Regulations, of which Charles Orchard, special agent for the Carnegie Steel Company, is chairman, made a progress report to the effect that it is attempting to arrange for the issuance of embargo advices affecting roads west of Buffalo through the Chicago office of the Car Service division instead of through the Washington office, thereby advancing publication from one to three days.

Effort Made to Prevent Overcharge Claims

The special committee on Freight Claims Prevention, of which C. B. Baldwin, manager of the Transportation department of the United Shoe Machinery Company, is chairman, reported that a letter purporting to be in the interest of the Intercoastal Steamship Lines was received from the Pacific Ocean Claim Association, calling attention to the many claims for damage and pilferage due to the poor containers and insufficiency of construction of packages moving from the port at San Francisco and requesting the committee to urge upon members the importance of strapping all cases. The committee recommended that the League reply to the Pacific Ocean Claims Conference suggesting that it make further investigations before calling upon members of the League to incur what may prove to be a wholly unnecessary expense.

In considering the request of W. C. Fitch, freight claim agent of the Southern Pacific at San Francisco, Cal., to circularize the members of the League for the purpose of minimizing errors made by shipping clerks in the description of goods with a view to preventing claims for overcharges and with a view to saving large sums in freight charges paid by the shipper or consignee due to overcharges which are never detected, the committee recommended that the circulars suggested by Mr. Fitch be sent to all members of the League and that representatives of chambers of commerce and commercial organizations take similar steps to bring this subject to the attention of their members.

The special committee to co-operate with the railroad traffic executives, of which W. H. Chandler, manager of the transportation bureau of the Boston Chamber of Commerce is general chairman, suggested that in considering the resolution adopted by the Iowa Traffic League recommending that railroad executives should restore to the traffic departments of their respective lines the rate-making power and that rate adjustments should be accomplished through direct contact with the shipping public instead of through the existing standing rate committees and general traffic officers' committees, it would not be advisable to go before the traffic executives unless all differences of opinion among members of the League were harmonized.

The Bill of Lading committee, in considering through bills of lading from interior points involving coastwise movements, reported that fundamental legal considerations prevent the establishment of through billing arrangements unless the water carriers are willing to submit their operations to the jurisdiction of the Interstate Commerce Commission, and as they are not willing to do this, the committee is of the opinion that the proper practice is to issue a domestic bill of lading consigning the property to the shippers' agent at the port of loading with sufficient instructions upon the bill of lading for reforwarding upon an ocean bill of lading and recommended that no action be taken by the League in the matter.

The committee recommended that it be authorized to take

appropriate steps to prevent a proposed amendment to the transcontinental freight bureau tariff naming rates from points in Canada to points in the United States to provide that shipments originating at points in Canada will be accepted subject to the terms and conditions of bills of lading prescribed by the Board of Railway Commissioners of Canada.

The committee on Car Demurrage and Storage, of which T. Noel Butler, traffic manager of the Woolson Spice Company is chairman, reported that the proposed changes in the uniform code of storage rules covering storage rule 3, (free time allowed) storage rule 6, (charges for storage on explosives and other dangerous articles) and storage rule 7, (claims) were considered in joint conference with the corresponding committee of the American Railway Association, and an agreement was reached with the American Railway Association's committee to recommend the proposed changes to the Interstate Commerce Commission for its tentative approval.

Car Pooling Plan Being Analyzed

The committee on Transportation Instrumentalities and Car Service, of which W. S. Crowl, traffic manager of the Michigan Alkali Company, is chairman, reported that since the Dallas meeting the committee has continued the investigation of the proposed car pooling plan, having submitted to the Railway Service Corporation some 23 questions seeking further information concerning the National Railroad Service Corporation, and its proposed functions and also information regarding the organization of that association and the National Association of Owners of Railroad Securities, and the car pooling plan. Up to the present time the committee has not received a reply to these questions and until such time as it does receive reply and a copy of the tentative bill which it understands has been prepared covering the federal incorporation of the National Railway Service Corporation it is impossible for the committee to make a complete report.

The American Railway Association has been given greater authority to enforce its orders than ever before, has decentralized its administration by establishing district offices and has surrounded such district managers with regional advisory boards composed of shippers and has enforced the car service rules in a flexible manner whereby shippers are permitted to load any cars available regardless of home routing. In principle, these measures are, in the opinion of the committee, similar to those advocated by the security owners. Under the improved condition of operation the railroads have handled an unprecedented amount of business without any serious car shortage. The committee, however, holds itself open to consider and investigate further the "Warfield plan."

A minority report urged that the proposed car pooling plan should not be passed lightly by the League as it was thought that it will be the means of effecting an immense saving in the empty car movement, especially at terminals, and consequently a great saving to shippers. The report stated that the only real objection to the pooling plan that has been raised up to the present time is that it will centralize transportation facilities in a way that might be termed interference by the federal government with private initiative. The minority report maintained that a pooling plan will avoid such a situation.

Tariff Mailing Lists Revised

The committee on Rate Construction and Tariffs, of which Frank E. Williamson, traffic commissioner of the Buffalo Chamber of Commerce, is chairman, reported that the committee has been conducting an investigation of the manner in which members of the League are receiving tariffs and supplements from the various lines and tariff issuing agents but did not recommend any action to be taken by the League. The investigation resulted in the revision of the tariff mailing lists of the carriers. The committee supported the application filed with the Interstate Commerce Commission by the New England Freight Association on May 7 for relief from Section 6 of the act with regard to posting freight tariffs at origin stations of New England lines where investigation has shown that such tariffs are unnecessary.

Government Ownership of Merchant Marine Vessels Opposed

The special committee on Merchant Marine, of which Seth Mann, attorney and manager of the traffic bureau of the San Francisco Chamber of Commerce, is chairman, offered a resolution that the National Industrial Traffic League oppose government ownership and government operation of merchant vessels and recommend to the United States Shipping Board and to the federal authorities that no plans shall be adopted which do not have for their object the prompt transfer of the government-owned merchant fleet to private enterprise. The government should not enter into competition with privately owned lines, provided, however, that it should first establish new and necessary routes which should be relinquished to private enterprise as soon as possible.

A second resolution proposed that private enterprise in the ownership and operation of the American merchant marine should be encouraged wherever possible and the government, either through its shipping board or through transports operated by other divisions such as the army and navy or otherwise, should not compete with private enterprise and that all government-owned or controlled vessels should be withdrawn from the freight and passenger business when operated in competition with vessels privately owned or operated. The third resolution urged that section 28 of the Merchant Marine Act of 1920 be repealed.

Officers Elected

The officers elected were: President, Charles Rippin, St. Louis, Mo.; vice-president, R. J. Menzies, New York; treasurer, E. C. Wilmore, Chicago; vice-presidents, C. H. Rolf, Philadelphia, Pa., for the Trunk Line territory; F. H. Baer, Cleveland, O., for the Central Freight Association territory; R. W. Poteet, New Britain, Conn., for the New England territory; A. G. T. Moore, New Orleans, La., for the Southwestern territory; T. M. Henderson, Nashville, Tenn., for the Southeastern territory; P. M. Hanson, Granite City, Ill., for the Western Trunk Line territory; Seth Mann, San Francisco, Cal., for the Pacific Coast territory, and Herman Mueller, St. Paul, Minn., for the Northwestern territory. Directors for the Trunk Line territory: F. W. Burton, Rochester, N. Y.; P. M. Ripley, New York; J. C. Lincoln, New York; G. S. Henderson, Baltimore, Md.; J. M. Belleville, Pittsburgh, Pa., and N. D. Chapin, Syracuse, N. Y.; for the Central Freight Association territory: R. B. Coapstick, Indianapolis, Ind.; J. F. McNally, Detroit, Mich.; L. G. Macomber, Toledo, Ohio; F. M. Renshaw, Cincinnati, Ohio; E. C. Nettles, Battle Creek, Mich.; H. A. Clark, Muncie, Ind.; F. T. Bentley, Chicago; C. L. Lingo, Chicago, and J. A. Brough, Chicago; for the New England territory: W. H. Chandler, Boston, Mass.; C. B. Baldwin, Boston, and J. F. Atwater, New Britain, Conn.; for the Southwestern territory: U. S. Pawkett, San Antonio, Tex.; C. D. Mowen, Fort Smith, Ark., and J. E. Johnston, Kansas City, Mo.; for the Southeastern territory: A. F. Vandegrift, Louisville, Ky.; for the Western Trunk Line territory: J. P. Haynes, Chicago; C. E. Childe, Omaha, Neb.; H. C. Wilson, Sioux City, Iowa, and H. F. Lindsay, Milwaukee, Wis.; for the Pacific Coast territory: S. J. Wettrick, Seattle, Wash.; for the Northwestern territory: F. S. Keiser, Duluth, Minn.; C. T. Vandenover, Minneapolis, Minn., and N. H. Strothman, Minneapolis, Minn.

The next annual meeting will be held at New York on November 19 and 20, 1924. A semi-annual meeting will also be held if the executive committee deems it advisable.

General News Department

The directors of the American Railway Express Company have chosen J. Horace Harding chairman of the board. The directors have not yet elected a successor to the late president, George C. Taylor.

Inspection Bureau Finds Defective 55 Per Cent of Locomotives Examined

The Interstate Commerce Commission's monthly report to the President on condition of railroad equipment shows that during October 6,507 locomotives were inspected by the Bureau of Locomotive Inspection and 55 per cent were found defective, while 525 were ordered out of service; also 103,827 freight cars were inspected, of which 4.7 per cent were found defective, and 2,300 passenger cars, of which 1½ per cent were found defective.

National Transportation Institute Publishes Weekly News Bulletin

"Transportation," a weekly bulletin published by the National Transportation Institute, 30 North La Salle street, Chicago, to record its activities, is now being distributed by the Institute to its subscribers. The bulletin will publish news and announcements regarding the Research Council and the activities at the headquarters of the Institute and will present facts and principles about transportation as found by the Research Council, especially in their relation to industry, agriculture, commerce and finance. The paper will be used exclusively for the news of the Institute and will not attempt to publish the news of events in the transportation world except matters that directly pertain to that body. It does not solicit advertising. Ralph E. Duncan is editor of the publication.

Fuel Association Competition Prize Awarded

The prize of $100 offered by Eugene McAuliffe through the International Railway Fuel Association for the best paper on fuel conservation by an engineman, fireman, conductor, brakeman or switchman has been awarded by the judges to W. L. Richards, locomotive engineman employed by the Union Pacific at North Platte, Neb. The competition which closed August 31 aroused wide interest and 2,028 papers were received by the association. The volume of work entailed in classifying and reading these papers was so great that a prompt announcement of the result was impossible.

In addition to the association prize of $100, Mr. Richards also receives the *Railway Age* prize of $50 for the best paper submitted in the contest, the Union Pacific prize of $100 for the best local paper and one of the Railway Review prizes of $10 for the winner of each local contest.

A. R. A. Report on Use of Derails

The report on derailing switches, presented to the Signal Section of the American Railway Association at its meeting in New York City on November 15, and unanimously adopted, was briefly noticed in the *Railway Age* of November 17. The names of the members of the committee making the report are given in the editorial columns of this issue. The report, substantially in full, is as follows:

Derails should not be used in main tracks.

On heavy grades, where the need of some device to check runaway trains or cars is indicated, properly designed deflecting tracks may be used.

Argument: Derails are required at grade crossings by law or Public Service Commissions in ten states, most of which are located in the middle west. In several others, commissions order them at some points, being governed by local conditions. In the majority of states no derails are required. It is not the general practice of railroads to install main track derails at interlockings of their own lines. Non-interlocked grade crossings are not provided with derails. Derails are not installed at automatic or manual block signal locations even on single track. Derails are seldom installed at the ends of double tracks. On railroads of three or more tracks, there is no safe place at which a derail may be located in the main track to insure against fouling other tracks when a derailment occurs. Even on a two-track railroad, this danger of fouling the opposite track, by reason of train buckling, when derailment occurs, is always present.

Accidents may not occur even if signals are overrun, but a derailment is certain if a train passes over an open derail; and even then a collision may result, and has, in several cases. In a few instances, the use of the derail actually caused a collision. Finally, the installation of a device to prevent an accident, by causing another which may be much worse, is illogical.

Railroad Accidents, Second Quarter of 1923

The Interstate Commerce Commission has issued a memorandum of the total of casualties in railroad accidents in the United States in the months of April, May and June, 1923, and comparing the figures with the same quarter of 1922. Seventy-nine persons, including 6 passengers, were killed in train accidents during this quarter and 1,052 were injured. The total number of persons killed in train and train service accidents was 1,615 and of injured 13,357. Adding the non-train accidents, the total number of killed shown for this three-months' period is 1,728, and of injured, 43,685. The casualties in different classes were as follows:

CASUALTIES IN RAILROAD ACCIDENTS FOR THREE MONTHS—APRIL, MAY, JUNE, 1923

Train accidents three months of	Passengers		Employees		Other persons		Total	
	Killed	Injured	Killed	Injured	Killed	Injured	Killed	Injured
1923	6	584	46	382	27	86	79	1,052
1922	7	552	63	286	24	83	94	921
Train and tr. service—								
1923	27	1,284	325	9,489	1,263	2,584	1,615	13,357
1922	25	1,335	246	6,228	1,102	2,373	1,373	9,936

It will be noted that the number of employees killed in train accidents was decidedly smaller this year than last; but including all accidents, there was a large increase in this column. The number of persons killed in non-train accidents, 113, was no less than 15 per cent above 1922 and of injured 44.6 per cent above.

The casualties at highway grade crossings (included in the foregoing table) numbered 500 killed and 1,376 injured, in the three months this year, as compared with 406 killed and 1,262 injured in April, May and June last year, increases of 22½ per cent and 9 per cent respectively. That the number of automobiles in use has largely increased is a familiar fact; and in the quarter under review, the miles run by locomotives, 452,080,000, was about 19 per cent greater than in the same quarter last year.

Standard Car Letter Ballot

As a result of the letter ballot of the mechanical division of the American Railway Association the four propositions pertaining to standard box cars and trucks failed of adoption by the requisite majority of two-thirds of the votes cast in each case. The essential objections to the designs recommended, however, centered about a few items and the recommendations for standard box cars and trucks have been returned to the committee on car construction with instructions that they be reviewed and returned to the general committee by December 7, after which the modified recommendations will be submitted to the membership at a special meeting for a further discussion and a proposition made for another letter ballot.

The majority of the roads voting in the negative on these propositions gave in detail their reasons for so voting. A meeting of the general committee was held to which the voting members of these roads were invited and the objections were considered in detail. Some of these objections indicated that there was not a clear conception of just what the recommendations embraced. The real objections to the designs were reduced to a few items.

The vote on the standard box cars and trucks was divided into four propositions and was as follows:

On the proposition to adopt as recommended practice designs for 4C and 4D single sheathed standard box cars: Voting yes, 120 memberships, representing 1,060,718 cars, 1,061 votes; voting no, 81 memberships, representing 742,524 cars, 650 votes; not voting, 198 memberships, representing 955,964 cars, 1,060 votes.

On the proposition to adopt as recommended practice designs for 4C and 4D double sheathed standard box cars: Voting yes, 119 memberships, representing 1,062,601 cars, 1,028 votes; voting no, 95 memberships, representing 1,010,508 cars, 953 votes; not voting, 185 memberships, representing 686,097 cars, 790 votes.

On the proposition to adopt as recommended practice designs for trucks, classes 2C, 2D and 2E designated as type W, including bolsters, side frames and other details: Voting yes, 110 memberships, representing 986,333 cars, 986 votes; voting no, 104 memberships, representing 1,086,776 cars, 995 votes; not voting, 185 memberships, representing 686,097 cars, 790 votes.

On the proposition to adopt as recommended practice designs for trucks classes 2C, 2D and 2E designated as type Y, including bolsters, side frames and other details: Voting yes, 109 memberships, representing 1,113,214 cars, 1,112 votes; voting no, 85 memberships, representing 959,895 cars, 869 votes; not voting, 185 memberships, representing 686,097 cars, 790 votes.

City Tries to Force Terminal Improvements at Chicago

Efforts to force the railroads using the Grand Central, the LaSalle and the Dearborn stations in Chicago to an agreement on new passenger and freight terminals to be built in the area now occupied by these railroads south of the city's central business district are being made by the city authorities. The city's interest in the plan centers primarily in the opportunities afforded by such developments for the establishment of additional through north-and-south streets between State street and the Chicago river, in the area occupied by the railroad terminals; because of the lack of streets in this area there is serious congestion in the four existing highways between the "loop" district and the south side of the city.

One means of securing relief was illustrated several months ago when the management of the Chicago & Western Indiana submitted plans for the development of a large passenger and freight terminal on the site of its Dearborn station and existing railway property to the south and west of it, whereby Dearborn street would be continued south across the railway area (described in the *Railway Age* of January 27). The New York Central and the Chicago, Rock Island & Pacific, joint owners of the LaSalle street station, have also been conducting independent studies for the development of a large terminal and in response to inquiries from the city on the progress being made the New York Central on September 16 submitted a tentative layout showing a new station fronting on Harrison street. On November 19 the Rock Island submitted a plan following somewhat similar lines but differing considerably as to the relocation of streets. As a consequence the city is now confronted with three proposals, each calling for a different arrangement of streets for the area in question and with little prospect of an early agreement of the roads in the adoption of any one plan.

As a means of forcing definite action, the city, on November 20, announced a plan for a series of elevated north and south streets extending across the railway area, which it is proposed to build at once without waiting for any modification or reconstruction of the railway terminals. This plan consists essentially of street viaducts for Federal street and Plymouth court on either side of the Dearborn station and similar viaducts for La Salle street and Sherman street on either side of the La Salle street station, the first two to converge at Fourteenth street into a connection with Dearborn street and the latter to terminate in the Roosevelt road viaduct. According to the estimate issued by the city, these viaducts would cost $3,200,000, the sum to be raised by special assessments, the bulk of which would presumably fall on the railroads owing to the fact that they own most of the abutting property.

Interstate Commerce Commission Reopens Grain Rate Investigation

In response to a petition of eight middle western states for an adjustment of freight rates on grain, grain products and hay, the Interstate Commerce Commission reopened this subject in a hearing which began at Kansas City on November 14. The application for the reduction in these rates was filed originally in September, 1922, by the Public Utilities Commission of Kansas and the commissions of Oklahoma, Nebraska, Missouri, Iowa, Minnesota, South Dakota and North Dakota intervened in behalf of their agricultural interests. On October 11, 1923, the Interstate Commerce Commission handed down an opinion to the effect that the evidence submitted on behalf of the farmers did not warrant a reduction in these rates. Acting on its own motion, the commission has now reopened the case for further hearing. The states contend that the existing rates in the middle west are unfair to the farmer because prices of other commodities have not declined as have prices for agricultural products.

The hearing is being conducted by Commissioners John J. Esch and Johnston C. Campbell, assisted by Elmer L. Beach and Henry C. Keene, examiners. Clyde M. Reed, chairman of the Kansas Public Utilities Commission, represented the farmers. In opening the hearing, witnesses for the states endeavored to show that wheat is being penalized unfairly in transportation, presenting comparisons of the rates on grain and hay with those of other commodities, which it is claimed are better able to pay the present rates than grain, grain products and hay. It was also claimed that the western group of roads can afford to grant the reductions requested.

H. J. Waters, editor of the Weekly Kansas City Star and former president of the Kansas State Agricultural College, pictured the discouragement of the wheat growers with existing conditions and indicated the reduction in the production of wheat which would result ultimately. J. B. Brown, president of the Kansas Farmers Co-operative Grain Dealers' Association, testified that the price paid Kansas wheat growers directly reflects transportation charges to the Kansas City market. Carl J. Peterson, Kansas state bank commissioner, testified that 26 banks, mostly in rural communities, had failed, indicating the efforts of the banks to assist the farmers. Others testifying included John Tromble, president of the Kansas Farmers' Union; C. H. Hyde, vice-president of the Oklahoma Farmers' Union; C. G. Worsham, associate professor of farm economics at the South Dakota Agricultural College; Paul M. Culver, former president of the constitutional convention and executive committeeman of the state farm bureau; James F. Reed, president of the Minnesota Farm Bureau Federation; T. V. Healy, president of the John Deere Plow Company, and H. R. Green, state senator from Moline, Kan.

The final testimony for the plaintiffs was presented by Clyde M. Reed, chairman of the Kansas Public Utilities Commission, who endeavored to show that western grain shippers are suffering heavily because of over-valuation of railroad property, declaring that an excess of $69,279,882 comes out of the pockets of western farmers and grain shippers annually. He also introduced figures which purported to show that western shippers are suffering more from excessive valuation than are eastern shippers. The first witness for the railroads was B. C. Biggerstaff, associate editor of the Daily Drovers' Telegram, who said that the farmer today is in much better shape than he has been since 1920. He declared that witnesses for the plaintiffs had misrepresented the farmers' condition in the Middle West, and alleged that the hearing was a "newspaper affair." Real dirt farmers ought to be subpoenaed to testify.

The railroads are represented in this hearing by W. F. Dickinson, general solicitor, and A. B. Enoch, general attorney for the Chicago, Rock Island & Pacific at Chicago; R. G. Merrick, general freight agent of the Atchison, Topeka & Santa Fe at Topeka, Kan.; D. L. Meyers, assistant freight traffic manager of the Atchison, Topeka & Santa Fe at Chicago, and L. E. Wettling, statistician of the western lines.

The hearing is expected to last two weeks, following which similar hearings will be held at Minneapolis, Minn., on November 26, at Spokane, Wash., on December 5, at San Francisco, Cal., on December 1, and at Phoenix, Ariz., on December 17.

Operating Statistics of Large Steam Roads—Selected Items for the Month of September, 1923

Region, road and year	Average miles of road operated	Locomotive-miles: Train-miles	Locomotive-miles: Principal and helper	Locomotive-miles: Light	Car-miles: Loaded (thousands)	Car-miles: Per cent loaded	Ton-miles (thousands): Gross, Excluding locomotive and tender	Ton-miles (thousands): Net, Revenue and non-revenue	Average number of locomotives on line daily: Serviceable	Unserviceable	Per cent unserviceable	Stored
New England Region:												
Boston & Albany	1923 394	260,923	278,811	29,237	5,425	71.4	272,702	112,559	112	32	22.4	...
	1922 394	255,448	270,172	27,154	5,063	76.0	242,765	100,655	106	35	24.9	...
Boston & Maine	1923 2,455	568,153	624,692	57,415	12,761	73.6	625,653	258,973	353	123	25.8	12
	1922 2,455	551,437	618,187	59,338	12,751	76.0	609,236	255,461	308	139	31.1	22
N. Y., New H. & Hartf	1923 1,974	490,299	516,585	34,002	11,853	71.1	604,235	260,211	299	76	20.2	8
	1922 1,976	427,879	467,476	28,808	11,691	76.7	554,800	244,331	244	98	28.6	4
Great Lakes Region:												
Delaware & Hudson	1923 886	329,618	456,549	40,409	8,786	68.5	544,030	275,548	245	60	19.7	60
	1922 887	301,828	402,487	37,910	8,583	74.6	505,888	265,873	251	60	19.1	101
Del., Lack. & Western	1923 993	462,619	548,971	89,476	14,749	72.1	753,703	322,932	290	64	18.0	44
	1922 994	426,794	528,385	108,658	13,891	73.6	710,837	315,844	266	100	27.4	10
Erie (inc. Chic. & Erie)	1923 2,309	1,004,651	1,116,325	102,433	36,759	68.1	2,106,670	918,025	704	121	14.7	163
	1922 2,309	751,106	835,068	62,275	27,040	74.2	1,474,504	675,835	430	316	42.3	8
Lehigh Valley	1923 1,317	515,309	566,163	85,129	14,927	69.9	830,914	386,484	415	135	24.6	54
	1922 1,317	481,745	534,225	65,030	13,376	72.1	745,915	357,597	347	207	37.3	52
Michigan Central	1923 1,827	557,512	574,712	22,048	18,246	68.3	958,911	390,785	333	58	14.7	62
	1922 1,827	516,249	521,551	23,744	18,016	73.5	881,658	361,923	293	106	26.6	42
New York Central	1923 6,469	2,223,261	2,514,349	188,791	80,408	64.0	4,844,786	2,163,823	1,375	374	21.4	337
	1922 6,468	2,001,185	2,249,729	181,333	74,953	71.0	4,257,350	2,006,749	987	739	42.8	16
New York, Chic. & St. L	1923 1,670	706,740	716,767	3,320	20,057	70.9	1,052,393	443,777	214	75	25.9	7
	1922 1,670	702,153	713,437	3,577	19,176	77.5	958,206	420,924	211	75	26.2	19
Pere Marquette	1923 2,197	432,969	448,087	7,753	10,612	70.2	598,518	302,649	193	27	12.2	13
	1922 2,182	311,024	315,988	6,122	8,434	75.8	425,611	198,714	146	62	29.7	1
Pitts. & Lake Erie	1923 231	167,014	172,553	2,189	5,930	62.2	456,474	267,428	78	13	14.6	4
	1922 228	149,040	153,857	833	5,388	67.0	382,014	228,802	55	24	30.3	...
Wabash	1923 2,418	681,492	717,262	16,210	20,118	72.9	1,054,779	448,069	264	62	19.0	...
	1922 2,418	477,577	495,118	5,506	15,184	79.5	754,952	353,656	248	97	28.0	5
Ohio-Ind.-Allegheny Region:												
Baltimore & Ohio	1923 5,212	2,112,382	2,445,645	174,190	58,564	66.0	3,642,687	1,838,923	1,100	187	14.5	86
	1922 5,235	1,248,156	1,426,124	98,790	32,152	66.9	2,033,459	1,068,357	784	551	41.3	2
Central of New Jersey	1923 695	252,038	278,446	37,389	6,294	67.7	368,239	180,065	231	48	17.2	30
	1922 692	267,840	294,658	35,881	6,110	67.4	363,715	180,030	205	54	20.9	15
Chicago & Eastern Illinois	1923 945	245,089	247,957	4,989	6,745	66.1	400,811	202,009	131	50	27.4	37
	1922 945	218,373	225,605	4,850	5,681	75.5	321,922	175,062	86	73	46.1	11
Cleve., Cin., Chic. & St. L	1923 2,377	752,821	786,263	8,470	23,856	64.9	1,506,487	744,778	363	76	17.4	41
	1922 2,378	590,328	614,666	7,299	20,151	71.0	1,158,607	575,268	227	226	49.9	...
Elgin, Joliet & Eastern[1]	1923 460	122,866	135,579	7,232	3,778	66.5	281,759	153,465	83	17	16.7	1
	1922 459	94,435	97,324	1,157	2,487	62.1	218,604	119,627	86	20	19.0	21
Long Island	1923 393	47,680	55,316	8,643	642	61.5	37,277	14,642	39	15	27.2	...
	1922 394	42,702	44,617	6,340	559	62.7	31,717	12,272	35	11	23.9	...
Pennsylvania System	1923 10,907	5,002,871	5,460,658	425,774	138,300	65.5	9,190,355	4,632,712	2,932	559	16.0	58
	1922 10,903	4,885,697	5,361,330	407,156	143,355	71.8	8,756,180	4,530,142	2,478	896	26.5	42
Philadelphia & Reading	1923 1,117	635,280	702,815	75,914	16,091	64.2	1,064,159	555,798	344	116	25.2	65
	1922 1,119	558,848	625,681	73,554	13,785	69.5	882,157	478,836	382	77	16.7	152
Pocahontas Region:												
Chesapeake & Ohio	1923 2,553	980,704	1,078,905	26,544	29,820	58.9	2,400,503	1,254,078	442	98	18.2	16
	1922 2,551	542,530	608,565	13,422	16,698	64.6	1,216,301	684,428	337	199	37.2	19
Norfolk & Western	1923 2,228	852,607	1,064,089	36,069	25,051	62.3	1,930,274	1,031,385	578	110	15.9	60
	1922 2,228	746,718	913,043	38,711	19,875	63.9	1,523,510	844,259	528	197	27.2	78
Southern Region:												
Atlantic Coast Line	1923 4,861	609,707	612,301	9,350	15,476	69.1	793,719	339,464	355	59	14.2	70
	1922 4,926	615,431	618,792	9,843	15,245	75.7	734,999	325,388	321	109	25.2	21
Central of Georgia	1923 1,907	281,082	282,951	5,766	5,973	75.1	304,940	141,781	126	21	14.1	...
	1922 1,907	268,037	269,802	3,911	5,588	77.9	281,900	133,620	117	16	12.3	...
I. C. (inc. Y. & M. V.)	1923 6,190	1,882,719	1,896,200	38,473	53,920	65.0	3,338,897	1,527,154	705	128	15.4	...
	1922 6,135	2,015,151	2,038,932	50,922	59,470	71.0	3,498,863	1,690,775	752	92	10.9	6
Louisville & Nashville	1923 5,032	1,682,188	1,786,971	68,161	31,105	63.4	2,018,223	995,435	611	87	12.5	...
	1922 5,021	1,344,251	1,437,903	57,241	24,131	69.5	1,429,453	710,036	597	97	14.0	...
Seaboard Air Line	1923 3,553	436,143	448,434	8,631	10,093	71.7	524,259	228,943	214	30	12.3	6
	1922 3,537	445,153	450,144	12,593	9,957	78.7	483,137	218,874	161	114	41.5	...
Southern	1923 6,942	1,436,181	1,487,130	32,406	33,521	71.6	1,749,436	783,752	833	100	10.7	...
	1922 6,942	1,148,202	1,176,649	38,774	24,586	79.2	1,202,578	556,925	742	300	28.8	1
Northwestern Region:												
Chic. & North Western	1923 8,463	1,712,090	1,804,939	23,847	40,486	64.9	2,315,993	904,011	888	170	16.1	37
	1922 8,427	1,471,210	1,536,309	19,959	34,107	69.7	1,925,185	866,089	656	376	36.4	2
Chic., Milw. & St. Paul	1923 11,007	1,822,695	1,877,967	73,359	48,300	66.5	2,695,393	1,213,835	918	166	15.3	85
	1922 11,027	1,712,124	1,755,125	75,159	44,260	71.5	2,411,565	1,169,680	761	301	28.3	49
Chic., St. P., M. & O	1923 1,726	343,298	370,515	16,658	6,901	67.3	375,563	155,100	161	44	21.3	11
	1922 1,726	330,863	351,208	15,253	6,418	77.5	328,652	150,993	142	73	33.8	11
Great Northern	1923 8,252	1,147,198	1,182,142	51,233	34,893	61.6	2,209,221	1,075,677	598	131	18.0	55
	1922 8,255	1,101,143	1,130,306	44,051	32,542	65.0	1,990,164	990,188	548	205	27.2	33
M., St. P. & S. Ste. M	1923 4,374	606,264	615,627	9,827	14,977	70.3	793,736	386,420	292	51	14.8	1
	1922 4,355	687,347	695,352	12,796	16,592	73.3	841,854	415,910	298	53	15.0	2
Northern Pacific	1923 6,415	1,082,650	1,130,425	65,664	31,849	65.2	1,878,315	829,535	593	133	18.3	36
	1922 6,388	981,958	1,024,108	50,007	27,334	72.4	1,525,124	740,603	577	147	20.3	69
Oreg.-Wash. R. R. & Nav. Co.	1923 2,188	257,717	275,785	32,328	6,811	71.0	396,862	191,602	154	23	13.0	6
	1922 2,143	246,585	274,293	33,839	6,088	73.4	348,732	173,823	134	38	22.3	1
Central Western Region:												
Atch., Top. & S. Fe	1923 9,905	1,942,618	2,101,481	134,710	60,093	66.3	3,396,688	1,170,856	786	180	18.6	53
	1922 9,798	2,036,387	2,170,934	141,557	59,278	69.4	3,238,314	1,187,366	754	210	21.8	29
Chic. & Alton	1923 1,010	357,640	364,488	6,039	9,011	66.0	530,724	219,235	122	36	22.6	7
	1922 1,010	220,288	222,879	6,173	5,157	71.3	297,535	130,998	76	67	46.8	3
Chic., Burl. & Quincy	1923 9,338	1,785,818	1,855,031	84,131	49,517	63.1	2,926,014	1,330,883	798	194	19.6	25
	1922 9,326	1,726,775	1,795,863	91,135	49,797	68.6	2,906,806	1,432,776	733	254	25.7	6
Chic., Rock Isl. & Pacific	1923 7,635	1,385,034	1,416,678	24,547	32,622	70.4	1,738,219	763,698	520	215	29.2	11
	1922 7,662	1,202,166	1,217,794	17,274	29,020	75.7	1,473,998	677,473	527	211	28.5	28
Denver & R. G. Wn	1923 2,593	354,060	437,812	80,203	7,308	63.8	441,095	192,654	241	92	27.5	2
	1922 2,593	312,806	376,137	70,276	6,756	66.0	401,986	187,171	220	105	32.3	4
Oregon Short Line	1923 2,367	479,268	503,303	29,916	11,276	65.9	672,847	282,982	193	35	15.2	12
	1922 2,365	453,782	472,360	31,191	9,870	64.8	607,311	276,171	185	54	22.6	17
Southern Pac. (Pac. Sys.)	1923 6,939	1,525,086	1,712,413	368,576	44,519	68.7	2,537,267	1,023,841	661	129	16.3	6
	1922 6,924	1,281,217	1,442,525	254,237	36,009	68.0	2,022,665	823,626	622	205	24.8	8
Union Pacific	1923 3,709	1,633,672	1,681,892	136,092	48,565	70.5	2,598,989	954,095	486	61	11.1	61
	1922 3,707	1,332,677	1,347,032	93,474	38,554	70.1	2,073,285	819,095	420	128	23.3	50
Southwestern Region:												
Gulf, Colo. & S. Fe	1923 1,897	277,077	284,326	5,225	7,364	66.8	416,174	180,458	115	28	19.7	5
	1922 1,895	233,575	238,297	5,133	6,234	71.8	333,230	149,829	109	41	27.5	7
Missouri-Kansas-Texas	1923 1,801	280,680	281,234	7,446	8,487	63.3	460,995	187,847	147	68	31.7	56
	1922 1,987	292,697	293,168	6,668	7,998	67.4	436,158	186,794	109	95	46.7	22
Mo.-Kans.-Tex. of Texas	1923 1,389	199,513	204,338	3,631	4,904	66.9	263,509	106,106	78	49	38.7	5
	1922 1,738	200,932	206,667	3,452	4,103	71.9	211,336	92,633	77	67	46.7	9
Missouri Pacific	1923 7,305	1,282,730	1,304,347	45,591	32,756	68.3	1,845,341	817,930	451	185	29.1	...
	1922 7,112	962,390	971,409	36,397	22,531	71.8	1,240,225	569,105	376	225	37.5	...
St. Louis-San Francisco	1923 4,683	896,565	911,491	16,858	18,057	67.7	1,008,071	450,139	378	125	24.8	16
	1922 4,683	685,098	691,210	14,089	11,753	70.1	643,850	292,552	290	155	34.8	...
Southern Pacific Lines (in Texas and Louisiana)[2]	1923 3,710	648,120	649,767	4,422	14,265	66.6	838,152	356,969	234	66	22.1	27
	1922 3,710	599,578	604,076	4,612	12,895	67.3	739,107	330,470	184	106	36.5	3
Texas & Pacific	1923 1,953	262,379	262,379	4,920	6,484	67.9	347,883	141,897	158	42	21.2	38
	1922 1,953	234,984	234,984	4,792	5,995	70.3	317,997	131,965	91	105	53.4	8

[1] No passenger-train service.

Compiled by the Bureau of Statistics, Interstate Commerce Commission. Subject to revision.

Compared with September, 1922, for Roads with Annual Operating Revenues above $25,000,000

Region, road and year	Average number of freight cars on line daily: Home	Foreign	Total	Per cent unserviceable	Stored	Gross tons per train, excluding locomotive and tender	Net tons per loaded car	Net tons per car-day	Car-miles per car-day	Net ton-miles per mile of road per day	Pounds of coal per 1,000 gross ton-miles including locomotive and tender	Passenger service: Train-miles	Passenger-train car-miles
New England Region:													
Boston & Albany.....1923	1,984	6,235	8,219	4.0	....	1,045	431	20.7	456	30.8	9,524	193	305,651	2,178,591
1922	2,143	6,055	8,198	4.8	....	950	394	19.9	409	27.1	8,517	219	309,992	2,009,502
Boston & Maine.....1923	13,504	17,135	30,639	11.6	....	1,101	456	20.3	282	18.9	3,516	156	880,232	5,071,955
1922	14,509	17,491	32,000	16.4	356	1,105	463	20.0	266	17.5	3,469	157	870,406	5,003,979
N. Y., New H. & Hartf..1923	19,917	16,717	36,634	20.8	....	1,232	531	22.0	237	15.2	4,394	155	1,066,611	7,091,213
1922	20,853	23,135	43,988	21.9	268	1,297	571	20.9	185	11.5	4,122	175	1,061,975	6,960,659
Great Lakes Region:														
Delaware & Hudson.....1923	9,383	8,372	17,755	5.6	1,550	1,650	836	31.4	517	24.1	10,363	192	198,867	1,207,037
1922	10,732	7,176	17,908	7.3	2,698	1,676	881	31.0	495	21.4	9,992	200	199,009	1,150,103
Del., Lack. & Western..1923	13,705	11,247	24,952	4.0	....	1,629	698	21.9	431	27.3	10,840	176	485,407	3,626,688
1922	12,718	12,309	25,027	7.7	92	1,666	740	22.7	421	25.1	10,591	211	485,628	3,529,466
Erie (inc. Chic. & Erie).1923	24,065	26,442	50,507	7.8	....	2,097	914	25.0	606	35.6	13,250	126	577,004	5,524,011
1922	27,331	31,642	58,973	13.7	7,057	1,963	906	25.0	382	20.6	9,755	149	591,515	4,502,177
Lehigh Valley 1923	20,272	11,942	32,214	5.2	1,856	1,612	750	25.9	400	22.1	9,783	168	347,850	2,793,499
1922	27,065	16,462	43,527	9.3	894	1,548	742	26.7	274	14.2	9,052	203	349,547	2,706,813
Michigan Central 1923	9,711	19,640	29,351	5.3	....	1,720	701	21.4	444	30.3	7,131	126	619,320	5,893,230
1922	9,735	19,865	29,600	12.3	....	1,708	701	20.1	408	27.6	6,605	117	564,828	5,266,167
New York Central.....1923	52,995	90,036	143,031	6.3	1,330	2,179	973	26.9	504	29.3	11,151	118	2,650,958	23,156,466
1922	64,744	79,321	144,065	12.1	889	2,127	1,003	26.8	464	24.4	10,343	128	2,496,004	20,456,759
New York, Chic. & St. L.1923	6,664	14,943	21,607	8.4	....	1,489	628	22.1	685	43.7	8,860	128	211,382	1,181,196
1922	4,367	13,808	18,175	13.7	....	1,365	599	22.0	772	45.4	8,404	124	211,108	1,066,803
Pere Marquette 1923	6,889	19,586	26,475	3.5	....	1,382	699	28.5	381	19.0	4,591	132	296,115	1,650,880
1922	7,390	15,497	22,887	13.4	....	1,368	639	23.6	289	16.2	6,036	132	225,682	1,385,471
Pitts. & Lake Erie.....1923	8,254	13,255	21,509	9.4	....	2,733	1,601	45.1	414	14.8	38,565	73	116,701	630,084
1922	13,469	10,877	24,346	36.6	250	2,563	1,535	42.5	313	10.9	33,462	75	111,764	586,367
Wabash 1923	9,533	14,052	23,585	2.6	....	1,548	657	22.3	633	39.0	6,177	141	490,155	2,923,841
1922	8,338	14,740	23,078	9.8	....	1,581	741	23.3	511	27.6	4,876	142	364,233	2,401,921
Ohio-Ind.-Allegheny Region:														
Baltimore & Ohio.....1923	55,529	48,237	103,766	4.2	....	1,724	871	31.4	591	28.5	11,761	176	1,487,497	9,989,336
1922	56,020	47,638	103,658	14.0	771	1,629	856	33.2	344	15.4	6,803	210	1,176,272	7,647,797
Central of New Jersey...1923	13,269	13,214	26,483	11.3	....	1,461	714	28.6	227	11.7	8,541	189	375,066	1,870,167
1922	15,188	11,408	26,596	6.1	4,941	1,358	672	29.5	226	11.4	8,676	190	374,408	1,839,241
Chicago & Eastern Ill....1923	11,479	5,424	16,903	15.4	....	1,635	824	29.9	398	20.1	7,125	167	226,696	1,414,355
1922	10,162	5,236	15,398	19.6	....	1,474	802	30.8	379	16.3	6,174	170	181,451	1,263,076
Clev., Cin., Chic. & St. L.1923	11,994	24,265	36,259	7.8	....	2,001	989	31.2	685	33.8	10,446	119	705,726	4,413,081
1922	11,469	26,405	37,874	13.5	313	1,963	974	28.5	506	25.9	8,064	130	632,196	3,927,291
Elgin, Joliet & Eastern..1923	8,947	7,817	16,764	8.0	....	2,293	1,249	40.6	305	11.3	11,127	116	.....	.....
1922	8,940	5,505	14,445	17.8	....	2,315	1,267	48.1	276	9.2	8,685	83	.....	.....
Long Island 1923	1,492	5,845	7,337	1.5	....	782	307	22.8	67	4.7	1,241	339	226,125	1,394,736
1922	1,961	3,488	5,449	4.8	....	743	287	22.0	75	5.5	1,038	318	220,062	1,368,668
Pennsylvania System 1923	169,134	117,776	286,910	4.4	2,293	1,837	926	33.5	538	24.5	14,159	144	5,259,097	36,466,094
1922	164,862	134,728	299,590	11.6	3,581	1,792	927	31.6	504	22.2	13,850	148	5,135,815	35,592,340
Philadelphia & Reading..1923	16,602	19,194	35,796	3.9	....	1,675	875	34.5	518	23.3	16,582	171	510,256	2,433,039
1922	15,609	15,347	30,956	5.0	743	1,579	857	34.7	516	21.4	14,269	182	499,571	2,368,125
Pocahontas Region:														
Chesapeake & Ohio.....1923	25,563	14,652	40,215	6.7	....	2,448	1,279	42.1	1,040	41.9	16,375	114	461,159	2,752,222
1922	30,157	19,684	49,841	13.8	....	2,242	1,262	41.0	458	17.3	8,944	130	431,458	2,383,533
Norfolk & Western.....1923	25,951	11,848	37,799	5.0	....	2,264	1,210	41.2	910	35.5	15,428	181	403,753	2,656,291
1922	26,135	14,769	40,904	6.1	....	2,040	1,131	42.5	688	25.3	12,632	190	384,390	2,446,078
Southern Region:														
Atlantic Coast Line.....1923	15,154	10,908	26,062	5.7	....	1,302	557	21.9	434	28.6	2,328	122	684,496	4,348,958
1922	11,819	12,301	24,120	17.3	....	1,194	529	21.3	450	27.8	2,202	124	675,565	4,002,959
Central of Georgia.....1923	2,642	4,718	7,360	5.6	....	1,085	504	23.7	642	36.0	2,479	152	315,967	1,573,378
1922	1,710	5,184	6,894	12.1	....	1,052	499	23.9	646	34.7	2,336	170	317,334	1,531,533
I. C. (inc. Y. & M. V.).1923	33,856	33,752	67,608	5.6	2,540	1,773	811	28.3	753	40.9	8,224	131	1,475,218	8,781,595
1922	26,177	38,009	64,186	7.5	112	1,736	839	28.4	878	43.5	9,187	139	1,414,269	8,290,412
Louisville & Nashville....1923	31,743	19,841	51,584	11.5	54	1,200	592	32.0	643	31.7	6,594	168	1,017,335	6,007,718
1922	22,978	21,635	44,613	12.7	69	1,063	528	29.4	531	26.0	4,714	186	983,076	5,815,252
Seaboard Air Line.....1923	8,379	9,602	17,981	17.2	....	1,202	525	22.7	424	26.1	2,148	153	535,092	3,171,716
1922	10,517	13,001	23,518	34.9	....	1,085	492	22.0	310	17.9	2,063	174	436,390	2,783,090
Southern 1923	29,843	28,451	58,294	4.2	....	1,218	546	23.4	448	26.8	3,763	186	1,289,271	8,049,937
1922	27,591	43,914	71,505	15.4	....	1,047	485	22.7	260	14.5	2,674	212	1,210,524	7,005,521
Northwestern Region:														
Chic. & North Western..1923	43,205	35,915	79,120	7.5	....	1,353	528	22.3	381	26.3	3,561	152	1,584,772	10,403,809
1922	38,456	41,178	79,634	8.4	....	1,309	589	25.4	363	20.5	3,426	164	1,289,360	8,653,212
Chic., Milw. & St. P....1923	50,596	34,157	84,753	8.1	....	1,479	666	25.1	477	28.6	3,676	142	1,456,425	9,400,072
1922	42,180	33,036	75,216	17.6	....	1,409	683	26.4	518	27.4	3,536	148	1,438,042	9,120,819
Chic., St. P., M. & O...1923	3,566	10,260	13,826	9.4	1,729	1,094	452	22.5	374	24.7	2,995	150	300,570	1,851,669
1922	3,307	9,462	12,769	14.5	48	993	456	23.5	394	21.6	2,916	151	258,846	1,677,985
Great Northern 1923	44,660	21,131	65,791	6.6	....	1,926	938	30.8	545	28.7	4,345	123	957,403	5,976,354
1922	43,059	12,486	55,545	8.2	....	1,807	899	30.4	594	30.1	3,998	140	881,489	5,725,466
M., St. P. & S. Ste. M..1923	19,364	8,790	28,154	6.9	2,138	1,309	637	25.8	458	25.2	2,945	112	441,649	2,673,668
1922	17,242	7,596	24,838	7.3	1,262	1,225	605	25.1	558	30.4	3,183	104	407,240	2,625,558
Northern Pacific 1923	32,692	14,532	47,224	7.3	1,311	1,735	766	26.0	586	34.5	4,310	118	800,382	5,776,312
1922	29,862	11,324	41,186	14.6	....	1,553	754	27.1	599	30.6	3,864	120	730,454	5,286,631
Oreg.-Wash. R.R. & N. Co.1923	5,970	7,776	13,746	3.7	....	1,540	743	28.1	465	23.3	2,919	195	245,974	1,719,087
1922	5,727	3,926	9,653	2.3	....	1,414	705	28.6	600	28.7	2,704	215	251,811	1,786,378
Central Western Region:														
Atch., Top. & S. Fe.....1923	46,929	19,508	66,437	6.5	5,388	1,749	603	19.5	587	45.5	3,940	134	1,703,038	13,988,737
1922	39,662	25,353	65,015	6.2	1,255	1,590	583	20.0	609	43.8	4,040	138	1,573,400	12,771,467
Chic. & Alton.....1923	7,261	8,419	15,680	7.2	....	1,484	613	24.3	466	29.0	7,234	141	282,494	1,767,821
1922	6,934	6,184	13,118	6.9	....	1,351	595	25.4	322	17.8	4,183	181	237,680	1,534,797
Chic., Burl. & Quincy....1923	44,740	28,874	73,614	4.4	1,591	1,638	745	26.9	603	35.5	4,751	161	1,529,157	10,811,231
1922	38,669	33,623	72,292	8.0	....	1,683	830	28.8	661	33.3	5,121	152	1,489,388	10,301,472
Chic., R. I. & Pacific....1923	28,521	28,007	56,528	7.9	4,540	1,255	551	23.4	450	27.3	3,334	166	1,244,907	7,446,450
1922	24,403	21,471	45,874	15.6	300	1,226	564	23.3	492	27.9	2,947	167	1,265,865	7,424,657
Denver & R. G. Wn....1923	12,506	6,574	19,080	4.6	3,192	1,246	544	26.4	337	20.0	2,476	234	278,169	2,113,582
1922	10,859	5,610	16,469	10.4	692	1,295	598	27.7	379	20.7	2,406	224	253,464	1,912,636
Oregon Short Line.....1923	7,900	6,390	14,290	6.3	....	1,404	596	25.1	660	39.9	3,985	142	283,716	2,166,782
1922	6,155	4,315	10,470	4.8	....	1,338	609	28.2	879	48.1	3,893	146	287,506	2,112,477
Southern Pac. (Pac. Sys.).1923	20,340	30,534	50,874	4.0	1,484	1,664	671	23.0	671	42.3	4,918	142	1,486,161	12,297,700
1922	21,936	19,877	41,813	7.7	....	1,579	643	22.9	657	42.0	3,965	150	1,331,694	11,169,074
Union Pacific 1923	20,433	13,617	34,050	5.4	....	1,591	584	19.6	934	67.4	8,576	150	884,650	7,668,534
1922	11,688	11,449	23,137	6.9	348	1,556	615	21.2	1,180	79.3	7,365	149	869,204	7,314,959
Southwestern Region:														
Gulf, Colo. & S. Fe.....1923	5,970	5,730	11,700	4.5	323	1,502	651	24.5	514	31.4	3,171	128	186,778	1,174,076
1922	5,199	5,389	10,588	4.1	203	1,427	641	24.0	472	27.3	2,636	145	191,220	1,125,636
Missouri-Kansas-Texas ...1923	9,896	7,542	17,438	6.1	1,058	1,874	669	22.1	359	25.6	3,477	125	253,971	1,825,049
1922	7,751	10,685	17,836	6.9	450	1,490	638	23.4	349	22.2	3,133	142	243,268	1,943,576
Mo.-Kans.-Tex. of Texas.1923	341	10,176	10,517	15.1	....	1,321	532	21.6	336	23.2	2,546	141	242,685	1,483,779
1922	227	11,448	11,675	6.6	....	1,052	461	22.6	264	16.3	1,777	180	186,935	1,354,993
Missouri Pacific.....1923	21,792	27,150	48,942	8.5	....	1,439	638	25.0	557	32.7	3,732	145	1,018,443	6,011,306
1922	21,606	28,093	49,699	11.3	....	1,289	591	25.3	382	21.0	2,667	160	724,238	4,640,558
St. Louis-San Francisco..1923	19,220	14,937	34,157	6.4	....	1,121	502	24.9	439	26.0	3,204	173	734,431	4,386,302
1922	16,367	22,793	39,100	8.3	....	940	427	24.9	249	14.3	2,082	211	644,093	3,633,969
Southern Pacific Lines (in Tex and Louisiana)[a]...1923	6,008	15,712	21,720	4.0	....	1,293	551	25.0	548	32.9	3,207	118	531,123	3,622,231
1922	5,615	15,164	20,779	6.7	353	1,233	551	25.6	530	30.7	2,969	132	529,234	3,421,677
Texas & Pacific.....1923	3,787	7,583	11,370	8.0	....	1,326	541	21.9	416	28.0	2,422	131	279,844	1,875,455
1922	3,951	8,781	12,732	15.2	....	1,353	562	22.0	345	22.3	2,253	155	223,023	1,531,772

[a]Includes Galveston, Harrisburg & San Antonio, Houston & Shreveport, Houston & Texas Central, Houston East & West Texas, Iberia & Vermillion, Lake Charles & Northern, Louisiana Western, Morgan's La. & Tex. R. R. & S. S. Co., and Texas & New Orleans.

Traffic News

Scott C. Bone, governor of Alaska, is reported to have stated recently that he has received information to the effect that the Canadian Pacific proposes to operate a line of boats on the Tanana river to connect with the Alaska Railroad at Nenana. These boats would link Dawson City with the Alaska Railroad and would enable tourists to go to the interior of Alaska from Dawson without returning to Skaguay.

The Texas Industrial Traffic League, Austin, Tex., has taken over the activities of the Transportation Committee of the Texas Chamber of Commerce and will represent the shippers at large in the state in the Oklahoma freight rate case now before the Interstate Commerce Commission, in consolidation with the Dallas-Fort Worth case which involves all of the rates in and through Texas. The first hearing in the rate case is expected to come up some time in January.

The White River Chamber of Commerce and Exhibit Train is a train of 10 cars, manned by 125 men and women, which has been sent out by commercial interests of the State of Arkansas to advertise the resources of the state; and contracts have been made for sending it to Memphis, Tenn., Sheffield, Ala., Chattanooga, Tenn., Atlanta, Ga., Washington, Baltimore, Jersey City, Boston, Niagara Falls, Cleveland, Indianapolis and St. Louis. The train was scheduled to be in Memphis on November 17 and, according to the itinerary, it will get back to Little Rock on November 30.

Anthracite Shipments in October

Shipments of anthracite for the month of October, as reported to the Anthracite Bureau of Information, Philadelphia, amounted to 6,564,526 gross tons. These figures are not comparable with the previous month of September on account of the suspension of mining during negotiations between operators and miners. The average daily shipment in September after operation was resumed amounted to 219,490 gross tons, while the average daily shipment during the month of October amounted to 262,581 tons, an increase of about 43,000 tons.

Shipments by originating carriers were as follows:

	October, 1923	October, 1922	October, 1921	September, 1923
Philadelphia & Reading	1,205,425	1,266,092	1,104,828	420,859
Lehigh Valley	1,174,768	1,166,195	1,048,996	372,997
Central of New Jersey	564,471	617,668	570,189	154,200
D., L. & W.	1,017,231	936,375	759,492	318,182
Delaware & Hudson	861,705	828,216	898,376	298,775
Pennsylvania	576,345	579,306	492,632	196,839
Erie	707,076	701,270	618,034	251,277
New York, O & W.	174,707	179,865	126,925	61,229
Lehigh & New England	282,798	292,941	253,311	120,582
	6,564,526	6,567,928	5,872,783	2,194,940

13 Roads Sued for Alleged Overcharges on Grain Shipments

Suits against 13 railroads for approximately $2,000,000 alleged overcharges on grain and flour shipments were filed on October 19 at Chicago, Topeka, Kans., St. Joseph, Mo., Kansas City and St. Louis. The action was brought by R. A. Jeanneret, chairman of the Transportation Committee of the Kansas City Board of Trade, on behalf of 800 shippers, members of the Kansas City Board of Trade, the Southwestern Millers' League, the St. Joseph Grain Exchange and the boards of trades of Atchison, Kans., and Wichita. The suits are based on the finding of October 20, 1921, by the Interstate Commerce Commission that rates charged on shipments of grain and grain products in the middle western territory were excessive. At Chicago, the roads involved in the suit are the Chicago Great Western; the Chicago, Burlington & Quincy; the Chicago, Milwaukee & St. Paul; the Chicago & Alton, and the Chicago, Rock Island & Pacific. At St. Louis, the Missouri Pacific; the Missouri-Kansas-Texas; the Wabash, and the St. Louis-San Francisco are being sued. The defendants at Kansas City are the Union Pacific and the Kansas City Southern; at Topeka, the Atchison, Topeka & Santa Fe, and at St. Joseph, the St. Joseph & Grand Island.

Commission and Court News

Interstate Commerce Commission

The commission has suspended from November 20 until March 19, 1924, the operation of certain schedules as published in a Chicago Junction Railway tariff in a supplement to Agent L. A. Lowrey's tariff which propose to establish l. c. l. freight service to Union Freight Station No. 6 on the Chicago Junction Railway from points of interchange with connecting lines at a rate of 14 cents per 100 lb. and providing that when such shipments are delivered to the Chicago Junction by the New York Central, the Michigan Central or the Cleveland, Cincinnati, Chicago & St. Louis the Chicago rates will apply to Union Freight Station No. 6.

Personnel of Commissions

E. H. WRIGHT has been appointed a member of the Illinois Commerce Commission by the Governor of that state, succeeding H. A. Johnson, who has resigned.

ANDREW J. O'REILLY, of St. Louis, Mo., has been reappointed a member of the Missouri Public Service Commission by the governor of that state. His new term will expire on June 5, 1929.

Labor Board Decisions

Seniority Not Forfeited After Consolidation of Offices

The Labor Board has ruled that an operator on the Knoxville division of the Southern did not forfeit his seniority when a telegraph office of the Southern at Citico, Tenn., was consolidated with one of the Cincinnati, New Orleans & Texas Pacific at the same place and was later abolished, the operator returning to his former position.—*Decision No.* 1998.

Orders Representation for System Instead of By Divisions

The Railroad Labor Board has declared illegal the vote conducted by the Atchison, Topeka & Santa Fe to determine representation for its dispatchers by divisions and has ordered that another election be held and that the votes be tabulated for the system as a whole, the result to determine representation for the entire system, instead of for each operating division.—*Decision No.* 1990.

Reverses Decision Ordering Mechanics' Reinstatement

The Labor Board, in reconsidering Decision No. 1726 in which it ordered that supervisors of mechanics on the Denver & Rio Grande Western, who had been considered out of service on account of their refusal to exercise their seniority as mechanics, be reinstated, has decided that evidence introduced in the rehearing was such that the request for reinstatement of the supervisors of mechanics should be refused, upholding the contention of the road.—*Decision No.* 2006.

Majority Representatives of a Craft Represent All in Craft Regardless of Membership in Organization

In passing on a dispute relative to the exclusion of freight house checkers, receiving and delivery clerks, enginehouse clerks, storekeepers, etc., from the station employees' agreement on the Maine Central and the Portland Terminal the Labor Board has decided that employees of a class or craft come under the provisions of the agreement negotiated by the organization representing a majority of such class or craft, the Brotherhood of Station Employees in this case, irrespective of membership or non-membership in the organization holding the agreement for that class.—*Decision No.* 1994.

Equipment and Supplies

Locomotives

THE LOUISVILLE, HENDERSON & ST. LOUIS, reported in the *Railway Age* of October 20 as having under consideration the question of purchasing 2 Pacific type locomotives, has ordered 1 Pacific type locomotive from the American Locomotive Company.

Freight Cars

PACIFIC FRUIT EXPRESS.—See Southern Pacific.

THE WESTERN PACIFIC is inquiring for 200 automobile cars.

THE WESTERN FRUIT EXPRESS COMPANY is expected to be in the market soon for 2,000 refrigerator cars.

THE RIO GRANDE DO SUL, Brazil, is inquiring through the car builders for 200, 28-ton steel frame flat cars.

THE ANACONDA COPPER MINING COMPANY has ordered 24 Ingoldsby type dump cars from the Koppel Industrial Car & Equipment Co.

THE NORTHWESTERN RAILWAY OF BRAZIL is inquiring through the car builders for 200 box cars, 100 cattle cars, 60 gondola cars and 40 flat cars.

THE SOUTHERN RAILWAY is inquiring for 1,000 box cars of 40 tons' capacity. The company also contemplates buying about 1,000 steel underframes.

THE ST. LOUIS SOUTHWESTERN is inquiring for 150 steel underframes, also for 1,000 double sheathed, steel underframe box cars of 40 tons' capacity.

THE NEW YORK, CHICAGO & ST. LOUIS, reported in the *Railway Age* of November 3 as inquiring for 15 caboose cars, will build these cars in its own shops. This company is inquiring for one dynamometer car.

THE SOUTHERN PACIFIC is inquiring for 2,975 box cars of 50 tons' capacity, 950 flat cars, 205 tank cars of 12,500 gal. capacity, 75 caboose cars, 500 automobile box cars, 250 stock cars, 600 drop bottom gondola cars, 500 flat bottom gondola cars, 500 logging cars and 4,325, 50-ton cars. The Pacific Fruit Express contemplates buying about 3,000 refrigerator cars.

THE CARNEGIE STEEL COMPANY will have repairs made to only 200 steel hopper cars at the shops of the Greenville Steel Car Company instead of 250 cars as was reported in the *Railway Age* of November 17, and repairs will be made to 50 at the shops of the Federal Shipbuilding Company. The other 248 as previously reported will be repaired in the shops of the Koppel Car Repair Company.

Passenger Cars

PITTSBURGH & LAKE ERIE.—See New York Central.

THE HAVANA CENTRAL has ordered 6 high speed interurban motor coaches from the Wason Manufacturing Company.

THE CANADIAN PACIFIC has ordered from the National Steel Car Corporation 15 steel frames for colonist cars.

THE CHICAGO & ALTON contemplates coming in the market for a number of cars, including coaches, dining cars, postal cars and baggage cars.

THE TENNESSEE, KENTUCKY & NORTHERN has ordered from the Edwards Railway Motor Car Company, Sanford, N. C., a 32-ft. completely equipped motor car.

THE TORONTO, HAMILTON & BUFFALO, reported in the *Railway Age* of September 15 as inquiring for 10 first class coaches and 6 smoking cars, has ordered 16 coaches and 6 smoking cars from the Canadian Car & Foundry Co.

THE NEW YORK CENTRAL has ordered for the Pittsburgh & Lake Erie 18, 70-ft. steel passenger coaches from the Standard Steel Car Company, and has also ordered 18 of the same type cars from the American Car & Foundry Company.

THE CANADIAN NATIONAL has ordered through the International Equipment Company, Ltd., Montreal representative of the Railway Storage Battery Car Company, New York, six 55-ft. steel combination passenger, smoking and baggage, storage battery cars, to be equipped with Edison batteries, General Electric motors and controls and Westinghouse air brakes.

Iron and Steel

THE LOUISVILLE & NASHVILLE has ordered 500 tons of structural steel from the American Bridge Company.

THE NEW YORK CENTRAL has ordered 250 tons of structural steel for a bridge at Albany, N. Y., from the American Bridge Company.

THE CHICAGO, BURLINGTON & QUINCY has ordered 738 tons of structural steel consisting of 20 girder spans and miscellaneous repairs from the American Bridge Company.

THE PENNSYLVANIA has ordered 108 tons of structural steel consisting of one 92-ft. half through plate girder span for use at Richmond, Ind., from the Fort Smith Bridge Company and 358 tons for a structure over 56th street, Chicago, from the American Bridge Company.

Machinery and Tools

THE PENNSYLVANIA RAILROAD has placed an order for a 6-ft. radial drill.

Miscellaneous

THE GEORGIA RAILROAD has ordered from the automotive car division of the J. G. Brill Company one pivotal front truck and material for building a gasoline passenger car.

THE NORFOLK & WESTERN is asking for bids until 12 o'clock noon, December 5, at Roanoke, Va., for 500,000 galvanized tie dating nails and for an additional lot of 1,000,000 galvanized tie dating nails.

Signaling

THE LOUISVILLE & NASHVILLE has ordered from the Union Switch & Signal Company signaling materials to be installed between Bay Minette and Mobile, Ala.; sixty Style "R" color light signals and 142 D. C. relays.

THE PHILADELPHIA RAPID TRANSIT COMPANY has ordered from the Union Switch & Signal Company material for an electro-pneumatic interlocking at Fortieth street on the Market street elevated line. The interlocking consists of a cross-over layout with complete signal protection and automatic stops involving eight working functions. Two of the signal levers will be equipped with mercury automatic time releases to provide automatic time locking.

THE W. T. SMITH LUMBER COMPANY, of Chapman, Ala., has placed an order with the Union Switch & Signal Company for an 8-lever Saxby & Farmer machine for a cabin door interlocking at the crossing of its road with the Louisville & Nashville, near Georgiana, Ala. Track circuits are provided on the L. & N. to prevent changing the route after a train has entered the approach section. The installation will be made by the Lumber company's own forces.

THE WYOMING STATE BOARD OF LAND COMMISSIONERS has announced its intention of intervening for the Wyoming North & South in its effort to secure permission to construct its tracks across the Salt Creek oil fields in Wyoming, approval of which was denied recently by the Department of the Interior. The State Board claims that jurisdiction over the land properly rests with the state rather than the national body.

Supply Trade News

The Philadelphia division of the **B. F. Sturtevant Company,** Boston, Mass., is now located at Thorne & Copewood streets (near White Horse pike and Haddon avenue), Camden, N. J.

J. P. Doughty, formerly auditor of disbursements of the Pere Marquette, has entered the sales organization of the **Burroughs Adding Machine Company,** Detroit, Mich., as a railroad specialist.

John D. Ristine, sales manager of the railroad motor coach division of the Service Motor Company with headquarters at Wabash, Ind., has resigned to become assistant vice-president of the **Mason Coal Company** with headquarters at Chicago.

H. N. Winner has been appointed general manager of the **Garlock Packing Company,** Palmyra, N. Y. Mr. Winner was formerly manager of the Philadelphia, Pa., branch of the Garlock Packing Company and later served as president and also as general manager of the Crandall Packing Company.

The Chain Belt Company, Milwaukee, Wis., manufacturers of Rex chain, transmission machinery and conveying equipment, formerly represented on the Pacific Coast by the Meese & Gottfried Company, San Francisco, Cal., has established direct factory branches and warehouses in Portland, Ore., and Seattle, Wash. The Northwest territory, with headquarters at Portland, will be in charge of **Allen C. Sullivan. Don B. Catton** will be the special sales representative for the Portland office. The Seattle and British Columbia territory will be handled by **Wm. F. Nichols** of the Seattle office. The Portland office of the Chain Belt Company is located at 67-69 First street and the Seattle office at 1040 Sixth avenue, South. Large stocks are maintained at both Portland and Seattle.

H. E. Graham, manager of traffic and sales of the Pressed Steel Car Company and its subsidiary, the Western Steel Car & Foundry Co., with headquarters at New York, whose resignation to become vice-president in charge of sales of the **Illinois Car & Manufacturing Co.,** with headquarters at Chicago was announced in the *Railway Age* of November 17, was born on June 21, 1880, at Alliance, Ohio. He entered railway service in 1896 as a call boy in the operating department of the Pennsylvania at Pittsburgh, Pa. He was later a time clerk in the division superintendent's office and a bill clerk in the traffic department until 1898 when, upon the organization of the Pressed Steel Car Company, he entered its employ as chief clerk in the traffic department at Pittsburgh, Pa. He held this position until 1905 when he was promoted to traffic manager with the same headquarters, which position he held until 1920 when he was promoted to manager of traffic and sales with headquarters at New York. He has held the latter position until his resignation to become vice-president in charge of sales of the Illinois Car & Manufacturing Co. Mr. Graham will take over the duties with the Illinois Car & Manufacturing Co. on January 1.

H. E. Graham

Railway Construction

ATCHISON, TOPEKA & SANTA FE.—This company contemplates the construction of second track from Summit, Cal., to Hicks, a distance of 44 miles.

ATCHISON, TOPEKA & SANTA FE.—This company will close bids on November 19 for the construction of a brick lavatory building at Argentine, Kans., to cost approximately $50,000.

BALTIMORE & OHIO.—This company has closed bids for the construction of buildings, tank foundations and pipe installations for water treating plants at North Dayton, Ohio, East Dayton and Sidney. The company has also awarded a contract to the American Water Softener Company, Philadelphia, for water softener equipment in treating plants at North Dayton, Ohio, Troy, Old River Junction, Lima, Deshler, Rosford and Fairmount, W. Va. The contract for the construction of buildings, tank foundations and the installation of piping and all machinery at Troy, Old River Junction, Lima, Deshler and Rosford has been awarded to Joseph E. Nelson & Sons Company, Chicago, as reported in the *Railway Age* of November 10.

EVANSVILLE, INDIANAPOLIS & TERRE HAUTE.—This company has applied to the Interstate Commerce Commission for a certificate authorizing the construction of a branch line or extension of six miles in Gibson and Pike counties, Ind.

FORT DODGE, DES MOINES & SOUTHERN (Electric).—This company has awarded a contract to the W. J. Zitterell Construction Co., Des Moines, Iowa, for the construction of a brick and concrete car house and yard office at Fort Dodge, Iowa, to cost $150,000, as reported in the *Railway Age* of October 27.

GULF COAST LINES.—This company will construct a brick passenger station, 44 ft. by 208 ft., at Mercedes, Tex., at a cost of $25,000.

HOUSTON & TEXAS CENTRAL.—This company plans the construction of an addition to its passenger station at Austin, Tex., at a cost of $16,000.

ILLINOIS CENTRAL.—This company has awarded a contract to the Drumm Construction Company, Chicago, for the construction of a concrete pit and scale house at Harahan, La

ILLINOIS CENTRAL.—This company has awarded a contract to Jerome A. Moss, Chicago, for the construction of a new passenger station at Normal, Ill., to cost $25,000.

ILLINOIS CENTRAL.—This company has prepared plans for the construction of additions to its shops and yards at Evansville, Ind., to cost approximately $1,000,000.

ILLINOIS CENTRAL.—This company plans the construction of a brick passenger station with two 700-ft. brick platforms at Carrollton avenue and Edinburgh street, New Orleans, La.

ILLINOIS CENTRAL.—The Interstate Commerce Commission has reopened for argument the proceeding in which it recently authorized the Southern Illinois & Kentucky to build for the Illinois Central a cut-off line between Edgewood and Metropolis, Ill. This is in response to protests made by the state of Illinois and representatives of the communities interested. Argument in the case will be heard on December 12 at Washington by the entire commission.

LAKE TERMINAL.—This company has awarded a contract to Roberts & Schaefer Company, Chicago, for the construction of a 200-ton reinforced concrete automatic electric coaling station and gravity sand plant with mechanical cinder handling plant at Lorain, Ohio.

MISSOURI-KANSAS-TEXAS.—This company has awarded a contract to H. B. McCoy, Cleburne, Texas, for the construction of additions to its car shops at Denison, Texas, to cost approximately $200,000.

MISSOURI PACIFIC.—This company has been ordered by the Arkansas Railroad Commission to construct a brick passenger

station at Newport, Ark., at a cost of $70,000. Plans must be completed within 60 days.

OKLAHOMA UNION.—This company contemplates the construction of an extension, 32 miles long, from Keifer, Okla., to Nuyka, where it will connect with the Oklahoma-Southwestern.

PENNSYLVANIA.—This company will construct a coal dock with unloading machinery and 60,000 ft. of storage track at Sandusky, Ohio, at a cost of $342,000.

PHILADELPHIA & READING.—This company has awarded a contract to W. V. Pangborne & Company, Philadelphia, for the installation of a battery charging plant at its new Camden, N. J., terminal. The installation will consist of a motor generator set, a charging panel and necessary wiring.

SOUTHERN PACIFIC.—This company will construct a new passenger station at Lindsay, Cal. Plans for the building have been completed and the work of construction will begin shortly.

SOUTHERN.—This company has awarded a contract to the Hardin Construction Company, Lexington, Ky., for the construction of a brick passenger station, 36 ft. by 95 ft., and to cost $18,500, at Lexington.

WABASH.—This company has prepared plans for an addition to its company hospital at Decatur, Ill., and we will begin work in the Spring. The addition will be 37 ft. by 140 ft. and two stories high.

WACO, BEAUMONT, TRINITY & SABINE.—This company has applied to the Interstate Commerce Commission for authority for the construction of an extension from Livingston to Beaumont, Port Arthur and West Port Arthur, Tex.

Canadian Railways Propose to Spend $20,000,000 to Eliminate Toronto Grade Crossings

Sir Henry W. Thornton, president of the Canadian National, and E. W. Beatty, president of the Canadian Pacific, on November 16, made a proposal for the elimination of grade crossings along the Toronto water front and the bringing into use of the Toronto Union Station. The project, which was laid before the city authorities, calls for an expenditure estimated at $20,476,000, of which the city would pay $4,633,000. The railways are now bound by an agreement made in 1913 to eliminate the grade crossings by means of a long viaduct. The plan offered by the railway presidents provides for highway bridges at Bathurst, John, Bay, York and Yonge streets and Spadina avenue and subways at Church, Jarvis, Frederick, Princess, Parliament, Trinity, Cherry and Queen East streets and Eastern and Logan avenues.

The cost of the all-viaduct plan provided in the 1913 agreement is estimated at $32,000,000, of which the city's share would be $8,846,000. The railway presidents recognize their obligation to stand by the 1913 agreement if the city insists upon it, but they put forward their alternative plan as less expensive and more satisfactory. Sir Henry Thornton called attention to the fact that Parliament would first have to approve participation of the C. N. R. in the work before the necessary funds would be available.

It was also pointed out that the revised plan offered by the railways could be carried out in ten months, whereas three years would be necessary if the 1913 plan were adhered to.

IN THE FEDERAL COURT at Buffalo, N. Y., on November 12, the grand jury returned indictments against the Buffalo, Rochester & Pittsburgh Coal & Iron Company for violation of the Interstate Commerce law. The indictments charge that the two companies entered into an agreement when the coal mining suspension of last year was impending, whereby coal was to be held in cars of the railway company for its own use and for the coal company's customers; also that the railway agreed not to collect demurrage charges, that discrimination was shown against other coal shippers and that concessions were granted in freight rates previous to the actual mining suspension. The last charge is that the railway failed to collect reconsignment charges on shipments made after the period of the emergency was ended. Each indictment cites charges on 100 separate counts, each involving a single shipment of coal.

Railway Financial News

ANN ARBOR.—*Dividends.*—At a meeting of the directors a resolution was adopted referring inaugurating preferred dividends to the executive committee for report to the board in December.

BALTIMORE & OHIO.—*Annual Meeting of Stockholders.—New Directors.*—At the annual meeting of the stockholders in Baltimore, Md., on November 19, Newton D. Baker, former Secretary of War, and John F. Stevens, of New York, who was formerly president of the Interallied Technical Board at Harbin, Manchuria, were elected directors. They take the places made vacant by the deaths of F. H. Goff, of Cleveland, and Richard H. Williams.

President Daniel Willard, in presenting the annual report of the company for the year 1922, said that there is now reason to believe that in the absence of abnormal conditions, dividends on Baltimore & Ohio common stock will be maintained. His statement follows in part:

During the first ten months of the present year (October, 1923, partly estimated) the gross earnings of the company amounted to $218,420,000, and the operating expenses and charges in that connection amounted to $167,660,000 or 76.76 per cent, leaving a net revenue from operation for the period of $50,760,000. Other income during the same period resulting from investments, etc., amounted to $5,065,000. The net corporate surplus of the company for the period referred to, after the payment of taxes, rentals and interests, was $22,100,000, a sum sufficient to pay a 4 per cent dividend for the year upon the $60,000,000 preferred stock outstanding, with a balance remaining of $19,700,000. It was with this situation in mind that your board of directors at the September meeting decided to resume dividends upon the common stock at the rate of 5 per cent per annum, the first payment of 1¼ per cent to be paid on December 1 to stockholders of record on October 13.

While it is, of course, not possible to forecast at this time what the earnings of the remaining months will be, it is reasonable to expect that the present year will realize a net surplus, after payment of fixed charges and preferred dividends for the year, in an amount equal to about 14 per cent upon the common stock outstanding.

During the first ten months of the present year the freight traffic handled by the company was 51.65 per cent in excess of the amount handled during the same ten months of the previous year, yielding $53,015,000 increased freight revenue, and during the same period the passengers carried one mile by the company were 18.41 per cent greater in number than during the same ten months of the previous year, yielding $3,417,000 increased passenger revenue.

While the Baltimore & Ohio has been able to secure and was in position to handle satisfactorily a large volume of business during the last ten months, its facilities were at no time used to full capacity, and an even greater volume of business could have been handled had it been available.

You will, of course, appreciate that no one can speak with definiteness concerning the future, but there is now reason to believe that in the absence of abnormal conditions, dividends on Baltimore & Ohio common stock will be maintained. Of course, the ability of the Baltimore & Ohio to earn and pay reasonable dividends upon its common stock depend not only upon business conditions generally, but also to a very considerable extent upon the system of regulation under which we operate.

As owners of the Baltimore & Ohio property and as citizens interested in the welfare not only of the property but of the country as a whole, I think you should urge your representatives in Congress to resist the demands which will probably be made in certain quarters for radical changes in the Transportation Act. As investors you are certainly entitled to the very modest return upon your property which the Transportation Act contemplates, and unless the railroads as a whole are permitted to earn the rate of return which has been fixed by the Commission, it is certain that they will not be able to provide the additional facilities which the growing commerce of this country will require. It is with this in mind that I urge that the Act be given a further trial in its present form, not only in your own interests but in the interests of all who depend upon the railroads for transportation.

BUFFALO, ROCHESTER & PITTSBURGH.—*Asks Authority to Issue Bonds.*—This company has applied to the Interstate Commerce Commission for authority to issue $1,500,000 of consolidated mortgage 4½ per cent bonds to reimburse the treasury for expenditures for additions and betterments. No authority is asked for the sale of the bonds, which it is proposed to hold until a more favorable time to market them.

CAROLINA, CLINCHFIELD & OHIO.—*Argument on Proposed Lease.*—The Interstate Commerce Commission has announced that oral arguments on the application of the Atlantic Coast Line and the Louisville & Nashville for authority to lease this line will be heard by the full commission at Washington on December 29.

CHICAGO & NORTH WESTERN.—*Asks Authority to Sell Bonds.*—This company has applied to the Interstate Commerce Commission for authority to issue and sell $15,250,000 of first and refunding

mortgage 5 per cent gold bonds, the authentication and delivery of which had been previously authorized. The bonds have been sold to Kuhn, Loeb & Co., at 90½.

CINCINNATI, NEW ORLEANS & TEXAS PACIFIC.—*Dividends.*—The directors have declared four quarterly dividends of 1¼ per cent on preferred stock, payable December 1, 1923; March 1, June 1 and September 1, 1924. A semi-annual dividend of 3 per cent and an extra dividend of 3½ per cent were declared on common stock, payable December 24, 1923.

New Director.—H. B. Voorhees has been elected a director to succeed Ralph N. Begien.

A supplemental agreement has been entered into with trustees of the Southern Railway whereby the annual rental paid the city of Cincinnati will be increased sufficiently to pay the interest of $2,000,000 bonds authorized by the Ohio General Assembly for increases in terminal facilities and for betterments.

CLEVELAND, CINCINNATI, CHICAGO & ST. LOUIS.—*Bonds Payable in Francs.*—According to a decision by Justice Platzek of the New York State Supreme Court, the 20-year debenture European loan 4 per cent bonds of this company are payable, both principal and interest, at the option of the holder in Swiss as well as in French or Belgian francs. The decision was in the case of Leo Levy versus the Cleveland, Cincinnati, Chicago & St. Louis Railroad. The plaintiff presented December, 1922, coupons at one of the designated banks in Switzerland in April, 1923, and demanded payment. At that time the Swiss franc was over 18 cents compared with exchange value of about 6 cents for the French franc. Tender of French francs to the amount specified in the coupons was refused and the same sum in Swiss francs was demanded. Legal action followed refusal of this demand. The bonds contain a clause providing that all questions concerning the terms and provisions of the issue shall be construed and determined according to the law of the United States.

COLORADO & SOUTHERN.—*Abandonment Proceeding Reopened.*—The Interstate Commerce Commission has reopened for further argument on December 1 the case in which it recently issued a certificate for the abandonment of a line in Colorado.

GULF, MOBILE & NORTHERN.—*Hearing.*—A hearing on the objections filed by the Hattiesburg (Miss.) Chamber of Commerce and later by the Mississippi Central Railroad to the purchase of the Beaumont branch of the Gulf, Mobile & Northern will be heard at Hattiesburg before the Mississippi Railroad Commission on December 6. The complaints were filed with the Interstate Commerce Commission, which asked the Mississippi commission to hold the hearing, and is expected to ask the state body to make a recommendation in the matter.

MISSOURI PACIFIC.—*Equipment Trust Certificates Authorized.*—The Interstate Commerce Commission has authorized this company to assume obligation and liability in respect of $3,990,000 of equipment trust certificates to be sold at not less than 95⅜.

MINNEAPOLIS, ST. PAUL & SAULT STE. MARIE.—*Dividends.*—This company has declared dividends of 4 per cent on both common and preferred stocks, payable out of accumulated surplus earnings of years 1909 to 1919 inclusive, payable December 17 to stock of record November 30.

No successor to George R. Huntington, late president of the Minneapolis, St. Paul & Sault Ste Marie, was elected by the board of directors at its meeting on November 9. It was announced, however, that another directors' meeting would be held before the first of the year and a president elected at that time.

NEW HOLLAND, HIGGINSPORT & MT. VERNON.—*Authority to Issue Securities Denied.*—The Interstate Commerce Commission has denied this company's application for authority to issue $300,000 of capital stock and $1,200,000 of bonds without prejudice on the ground that the record fails to disclose such facts as will enable the commission to make the necessary statutory findings.

NEW JERSEY, INDIANA & ILLINOIS.—*Asks Authority to Increase Stock.*—This company has applied to the Interstate Commerce Commission for authority to increase its common capital stock by $275,000.

OKLAHOMA CITY-SHAWNEE INTERURBAN.—*Asks Authority to Acquire Road.*—This company has applied to the Interstate Commerce Commission for a certificate authorizing the acquisition and operation of a line from Oklahoma City to Shawnee, Okla., 38 miles; also for the issuance of $800,000 of common stock and $800,000 of first mortgage bonds to be issued to the owner of the property, H. R. Hudson, as the purchase price of the road.

PARIS-LYONS-MEDITERRANEAN.—*Dividends.*—This company has declared an interim dividend of 20 francs per share on the ordinary stock and one of 10 francs per share on the beneficiary stock, both payable on and after November 2, 1923, according to information received by the foreign department of Moody's Investors' Service.

READING COMPANY.—*Asks Authority to Operate Reading Lines.*—This company has applied to the Interstate Commerce Commission for authority to acquire and operate in interstate commerce the lines of the Philadelphia & Reading and thirteen subsidiaries which it has heretofore controlled, in accordance with an agreement entered into, pursuant to the decree of the court in the Reading dissolution case, to merge and operate these lines. The securities of the Reading Company are to be undisturbed and the stock of the companies to be merged are to be cancelled without exchange of securities. The Reading has also asked authority to issue $63,084,666-⅔ of general and refunding mortgage 4½ per cent gold bonds for the purpose of refunding its share of the liability under the general mortgage bonds jointly issued by the Reading Company and the Philadelphia & Reading Coal & Iron Company.

SOUTHERN.—*Asks Authority to Sell Bonds.*—This company has applied to the Interstate Commerce Commission for authority for the sale of $20,000,000 development and general mortgage 4 per cent gold bonds, heretofore nominally issued and held in the treasury, which will have appended an unsecured promissory obligation to pay 2 per cent additional interest. The bonds have been sold, subject to the approval of the commission to J. P. Morgan & Co., at 93 and accrued interest.

SOUTHERN PACIFIC.—*Asks Authority for Equipment Trust Certificates.*—This company has applied to the Interstate Commerce Commission for authority for an issue of $23,100,000 of 5 per cent equipment trust certificates to be sold at not less than 95⅛ to Kuhn, Loeb & Co.

SOUTHERN PACIFIC.—*Equipment Trusts Sold.*—Kuhn, Loeb & Co. have sold at 97.38 to yield about 5.35 per cent, $23,100,000 5 per cent equipment trust certificates, series "F."

ST. PAUL UNION DEPOT COMPANY.—*Asks Authority to Issue Bonds.*—This company has filed with the Interstate Commerce Commission an amended application in place of that submitted about a year ago for approval of a first and refunding mortgage for $20,000,000 and authority to issue $15,500,000 of the bonds, to be guaranteed by the proprietary companies. It is proposed to issue and sell $15,000,000 of bonds at about 92½, to use $500,000 to retire a prior mortgage, $9,500,000 to refund and pay a like amount of maturing gold notes and the balance for construction.

Dividends Declared

Atlantic Coast Line.—Common, 3½ per cent, semi-annually, payable January 10 to holders of record December 14.

Boston & Providence.—2½ per cent, quarterly, payable January 1 to holders of record December 20.

Chestnut Hill.—75 cents, quarterly, payable December 4 to holders of record November 21.

Cincinnati, New Orleans & Texas Pacific.—Preferred, 1¼ per cent, quarterly, payable December 1, 1923; March 1, June 1 and September 1, 1924; common, 3 per cent, semi-annually, and 3½ per cent, extra, payable December 24.

Erie & Pittsburgh.—1¾ per cent, quarterly, payable December 10 to holders of record November 30.

Georgia, Southern & Florida.—First and second preferred, 2½ per cent, payable November 30 to holders of record November 24.

Illinois Central (Leased Lines)—$2, semi-annually, payable January 1 to holders of record December 11.

Minneapolis, St. Paul & Sault Ste. Marie.—Preferred, 4 per cent, payable December 17 to holders of record November 30.

Trend of Railway Stock and Bond Prices

	Nov. 20	Last Week	Last Year
Average price of 20 representative railway stocks	60.99	61.26	66.67
Average price of 20 representative railway bonds	82.42	82.65	80.04

Railway Officers

Financial, Legal and Accounting

J. F. Sells has been appointed general auditor of the Escanaba & Lake Superior, with headquarters at Milwaukee, Wis.

C. G. Geyer, district freight representative of the Pennsylvania, with headquarters at Detroit, Mich., has been promoted to freight claim agent, with headquarters at Chicago, succeeding **R. W. Cooke,** promoted to general freight agent.

H. F. Brahany has been appointed auditor of disbursements of the Pere Marquette, succeeding **J. P. Doughty,** who has resigned to accept service with the Burroughs Adding Machine Company.

Operating

S. Butler has been appointed superintendent of a newly created division on the Chesapeake & Ohio, with headquarters at Russell, Ky.

G. N. Harder has been appointed assistant to the president and acting general manager of the Escanaba & Lake Superior, with headquarters at Wells, Mich., succeeding C. W. Kates, whose death on November 12 was reported in the *Railway Age* of November 17.

J. B. Hutchinson, Jr., whose promotion to assistant to the general manager of the Northwestern region of the Pennsylvania, with headquarters at Chicago, was reported in the *Railway Age* of October 27, was born on March 3, 1876, at Bristol, Pa. After his graduation from Princeton University he entered the service of the Pennsylvania on January 1, 1898, as a rodman. On April 18, 1899, he was transferred to the office of the principal assistant engineer at Altoona, Pa., and in November, 1899, was promoted to assistant supervisor of the West Pennsylvania division. Mr. Hutchinson was transferred to the Pittsburgh division in 1900 and a year later was promoted to supervisor of the West Pennsylvania division. In 1905 he was transferred to the Middle division and held this position until January 15, 1910, when he was promoted to division engineer of the West Jersey & Sea Shore, a part of the Pennsylvania system. He was transferred to the Williamsport & Susquehanna divisions January, 1913, and in February of the following year was transferred to the Monongahela division. He was transferred to the Pittsburgh division in September, 1916, and in April, 1917, was promoted to assistant superintendent. In October of that year he was again promoted to superintendent of the Tyrone division and acting superintendent of the Conemaugh division. He was made superintendent of the Conemaugh division in May, 1918, and in March, 1920, was promoted to general superintendent of the Northern Ohio division. Mr. Hutchinson was transferred to the Toledo division in March, 1921, and in July, 1922, was transferred to the Michigan division with headquarters at Grand Rapids, Mich. He was holding this position at the time of his recent promotion to assistant to the general manager of the Northwestern region.

J. B. Hutchinson, Jr.

Traffic

J. A. Ferguson has been appointed commercial agent for the Erie, with headquarters at Pittsburgh, Pa.

H. T. Harlow, city passenger agent of the Erie at Chicago, has been promoted to general western passenger agent, with the same headquarters.

F. H. Clendenning has been appointed foreign freight agent and **W. L. Wright** assistant foreign freight agent of the Canadian Pacific at Vancouver, B. C.

R. W. Cooke, freight claim agent on the Pennsylvania, with headquarters at Chicago, has been promoted to assistant general freight agent of the Northwestern region, with the same headquarters, succeeding **J. D. Couffer,** deceased.

Paul T. Healy has been appointed commercial freight agent of the Western Maryland with headquarters at Columbus, Ohio. **F. G. Brown** has been appointed to a similar position at St. Louis, Mo., as has **E. J. Westine** at Kansas City, Mo.

William Pedrick, Jr., division passenger agent of the Pennsylvania at New York since 1917, has been appointed general eastern passenger agent with the same headquarters. Mr. Pedrick was born on October 26, 1870, at Rancocas, Burlington county, New Jersey, and received his education in the local public schools, at Mount Holly Academy and Temple College at Philadelphia. He began his railroad career in 1886 as a telegraph operator, later serving as freight and ticket agent, and train dispatcher's operator. On February 15, 1893, Mr. Pedrick was promoted to the passenger traffic department at Atlantic City, where he represented the railroad for ten years. While located there, he was largely instrumental in building up the through train service between that seashore resort and New York City. He was advanced to the important post of city passenger agent at Washington, D. C., in 1903. A further promotion came in May, 1905, when he was transferred to Philadelphia, as acting district passenger agent, succeeding to the title of district passenger agent a year later. After seven years' service in charge of the Philadelphia district, he was sent to New York City in 1912, as assistant district passenger agent, remaining in that position one year, when he became division passenger agent of the combined Baltimore-Washington district, which included the territory south of Washington and east of the Mississippi river. In 1917 Mr. Pedrick returned to New York City as division passenger agent, where he had jurisdiction over all matters pertaining to passenger traffic in Greater New York, Eastern New York State, Northern New Jersey, Connecticut, Western Massachusetts and the City of Montreal, Canada. Several years ago Mr. Pedrick introduced the passenger soliciting system which is still in general vogue at the present time. He is also responsible for the introduction and perfection of the comprehensive telephone and telegraph system for the distribution of Pullman space in New York City.

William Pedrick, Jr.

Engineering, Maintenance of Way and Signaling

E. O. Wood, assistant division engineer of the Pennsylvania with headquarters at Pittsburgh, Pa., has been promoted to division engineer with headquarters at Buffalo, N. Y.

Malcom S. Miller has been appointed division engineer of the Harrisburg division of the Philadelphia & Reading to succeed W. R. Dunn, transferred. **P. R. Bickford** has been ap-

pointed supervisor at Olney, Pa., succeeding F. W. Biltz, transferred.

W. F. Turner, division engineer of the Tucson division of the Southern Pacific, with headquarters at Tucson, Ariz., has been transferred to the Sacramento division, with headquarters at Sacramento, Cal., succeeding **E. E. Mayo,** who has been transferred to the construction department. **P. T. Robinson,** division engineer of the East Bay electric division, with headquarters at Oakland, Cal., has been transferred to the Tucson division, succeeding Mr. Turner. **W. H. Phelps,** assistant division engineer of the Coast division, with headquarters at San Francisco, Cal., has been promoted to division engineer of the East Bay electric division, succeeding Mr. Robinson.

J. C. Wrenshall, Jr., division engineer of the New York division of the Philadelphia & Reading, whose promotion to the position of engineer, maintenance of way, with headquarters at Philadelphia, Pa., was announced in the *Railway Age* of November 17, page 940, succeeding Frank S. Stevens, retired, was born on August 12, 1868, at Baltimore, Md., and was educated at the University of Virginia. He entered railway service on June 1, 1891, as an assistant supervisor for the Baltimore & Ohio at Cumberland, Md. The following year he was promoted to supervisor at Hagerstown, Md., and in 1895 was transferred in a similar capacity to Baltimore. In 1898 he was appointed division engineer at Cumberland and in 1899 was transferred to Washington, D. C. The following year he became a transitman in the chief engineer's department of the Philadelphia & Reading and shortly thereafter was appointed supervisor at Lebanon, Pa. In 1902, he was transferred to Harrisburg, Pa., in the same capacity and, in 1903, to Trenton, N. J. In 1905 he was promoted to division engineer at Harrisburg and, in 1910, was transferred in a similar capacity to Reading, Pa. In 1918 he was appointed division engineer of the New York division with headquarters at Philadelphia, which position he was holding at the time of his recent promotion.

J. C. Wrenshall, Jr.

Mechanical

E. G. Sanders has been appointed fuel supervisor of the Panhandle & Santa Fe, with headquarters at Amarillo, Tex.

Purchasing and Stores

W. R. Culver has been appointed general storekeeper of the Pere Marquette, with headquarters at Grand Rapids, Mich., succeeding D. W. Roberts, who has resigned.

Obituary

H. R. Carpenter, whose death on November 12 was reported in the *Railway Age* of November 17, entered railway service in 1885 as a rodman on the Union Pacific. Two years later he was appointed assistant engineer on surveys, construction and reports on the Western Pacific and in 1892 he was appointed engineer in charge of location and construction on the Denver & Rio Grande. From 1895 to 1898, Mr. Carpenter was engaged in private practice, but in the latter year he returned to railway service as chief engineer of the Colorado Springs & Cripple Creek District Railway. After another year of private work in 1903 and 1904, he entered the service of the Missouri Pacific as an assistant engineer on location, construction and reports. In 1912 Mr. Carpenter was promoted to engineer maintenance of way and in 1915 to assistant chief engineer. During the period of federal control, he was chief engineer of the southern lines of that road, being returned to his position as assistant chief engineer of the system in March, 1920, when government operation was ended. He remained in this capacity until his death.

Clifford Thorne, the Iowa attorney and economist who was widely known for his legislative activities, particularly in railroad matters, died in London, England, on November 13. His death was due to pneumonia and occurred while he was on a trip around the world with his family in an effort to regain his failing health. As an outstanding figure among the interests which favored repressive railroad legislation, Mr. Thorne was constantly engaged in leading the battles for lower transportation rates and increased corporation taxes. As a member and chairman of the Iowa Railroad Commission from 1910 to 1917 he was the author of two notable pieces of Iowa legislation; one a law creating the office of state commerce counsel to appear for the public in cases brought before the state and Interstate Commerce Commission, and the other a law against unfair competition in prices of commodities for the purpose of destroying competition in trade. He was president of the National Association of Railway Commissioners in 1914 and 1915. After his retirement from the Iowa Railroad Commission, Mr. Thorne was appointed counsel for the Corn Belt Meat Producers' Association and the American Farm Bureau Federation. He later was chairman of the Legislative Committee of the National Shippers' Conference. Last year he was a candidate for the Republican nomination to the United States Senate from Iowa, finishing second in the primary.

George Chadbourne Taylor, president of the American Railway Express Company, died at his home at Pelham Heights, N. Y., on November 18. Mr. Taylor was born on September 21, 1868, at Ripon, Wis., where he attended the public schools and Ripon College. At the age of 17 he went to work for the American Express Company, driving a wagon. He served successively in various minor capacities up to the grade of chief clerk to a division superintendent. He was later made route agent in charge of the Great Northern lines, and in 1892 organized a new service for the American Express over the Missouri-Kansas-Texas and the Illinois Central. Next he became, in order, assistant superintendent of the Southern division, general agent at Chicago and assistant general manager of the Central division, with headquarters in Cleveland. The company organized a Pacific division and put Mr. Taylor in charge of it, with offices in Salt Lake City. In 1911 he was recalled to Chicago as general manager of the Western department, representing all lines of the company west of Buffalo. The next year he was elected vice-president of the American Express Company, and succeeded James C. Fargo as president on the latter's death in 1915. On July 1, 1918, the great express companies, viz., the American, Adams, Wells-Fargo and Southern, were combined into the American Railway Express Company, with Mr. Taylor as president. When the railroads were returned to their owners in 1920 this express merger remained intact. The four constituent companies kept their corporate entities, however, and as president of the American Express Company Mr. Taylor continued to direct such financial affairs of the order company as foreign exchange, travelers' checks and other foreign business.

G. C. Taylor

Railway Age

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